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TRANSACTIONS

OF THE

FIFTY-FOURTH SESSION

OF THE

AMERICAN INSTITUTE OF HOMŒOPATHY,

HELD AT OMAHA, NEB., JUNE 23, 1898.

Instituted April 10, 1844.

EDITED BY

EUGENE H. PORTER, M.A., M.D., GENERAL SECRETARY.

NEW YORK:
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1899

AUTHORIZED DEFINITION.

At the Annual Session of 1881, the American Institute of Homœopathy ordered as follows:

1. That the President's definition of the words "Regular" and "Irregular," as applied to schools and practitioners of medicine, be adopted by this Institute as correct.

2. That hereafter this definition be conspicuously printed in all published documents and TRANSACTIONS of this Institute, in order that the profession, of all schools, may the sooner be familiarized with, and led to adopt it.

"*A REGULAR PHYSICIAN.—A graduate of a regularly incorporated medical college. The term also applies to a person practising the healing art in accordance with the laws of the country in which he resides.*"

See *Transactions* of 1881, pp. 23, 68 and 71.

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PREFATORY NOTE.

Owing to the plan of work pursued by most of the Sections at Omaha, and which seemed to be very successful and satisfactory, the actual number of papers presented to the Institute was largely reduced. The discussions, although in some cases more than usually full, do not materially increase the number of pages. Should this decrease in the quantity of manuscript presented continue another year it will be possible to again "lead" all the pages in the Transactions and insert in the next volume some matter heretofore unavoidably omitted.

Every care has been taken to insure a correct report of the discussions, but the dilatoriness of many of the members in returning corrected proof has not only lessened the accuracy but has delayed the appearance of the volume. New type has been used throughout the book and every effort has been made to insure correctness and dispatch. The Committee on Publication has given the manuscript careful consideration.

Eugene H. Porter, M.A., M.D.,
General Secretary.

181 West Seventy-third Street, New York City,
January 1, 1899.

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W. L. JACKSON, M.D.,	Boston, Mass.
A. J. GIVENS, M.D.,	Stamford, Conn.

Chas. S. Elliott, M.D.,	Kansas City, Mo.
W. D. Bayley, M.D.,	Philadelphia, Pa.
Wm. M. Butler, M.D.,	Brooklyn, N. Y.
Geo. Smith Adams, M.D.,	Westboro, Mass.
F. C. Richardson, M.D.,	East Boston, Mass.
G. O. Welch, M.D.,	Fergus Falls, Minn.
J. H. Cooley, M.D.,	Plainfield, N. J.
Wm. H. H. Bull, M.D.,	Atlantic City, N. J.
Jas. P. Pursell, M.D.,	Easton, Pa.
O. R. Long, M.D.,	Ionia, Mich.
A. W. Baily, M.D.,	Atlantic City, N. J.
H. J. Evans, M.D.,	Baltimore, Md.
A. Stanley Dolan, M.D.,	San Bernardino, Cal.
E. P. Colby, M.D.,	Boston, Mass.
Ellen L. Keith, M.D.,	Framingham, Mass.
C. T. Hood, M.D.,	Chicago, Ill.
G. H. Wright, M.D.,	Forest Glen, Md.

Otology, Ophthalmology, and Laryngology.

Herbert D. Schenck, M.D., Chairman, 241 McDonough Street,	Brooklyn, N. Y.
C. Gurnee Fellows, M.D., Secretary, 70 State Street,	Chicago, Ill.
E. W. Beebe, M.D.,	Milwaukee, Wis.
Howard P. Bellows, M.D.,	Boston, Mass.
Elmer J. Bissell, M.D.,	Rochester, N. Y.
Chas. H. Helfreich, M.D.,	New York, N. Y.
S. S. Kehr, M.D.,	Denver, Col.
W. H. King, M.D.,	Washington, D. C.
E. H. Linnell, M.D.,	Norwich, Conn.
George B. Rice, M.D.,	Boston, Mass.
William Spencer, M.D.,	Philadelphia, Pa.
C. J. Swan, M.D.,	Chicago, Ill.
Chas. M. Thomas, M.D.,	Philadelphia, Pa.
C. H. Vilas, M.D.,	Chicago, Ill.
Fred. D. Lewis, M.D.,	Buffalo, N. Y.
George H. Quay, M.D.,	Cleveland, O.
Thomas L. Shearer, M.D.,	Baltimore, Md.
Irving Townsend, M.D.,	New York, N. Y.
Charles E. Teets, M.D.,	New York, N. Y.

PROCEEDINGS

OF THE

FIFTY-FOURTH SESSION

OF THE

American Institute of Homœopathy,

HELD AT

OMAHA, NEB.,

JUNE 23, 1898.

FIRST DAY—EVENING SESSION.

OMAHA, NEB., June 23, 1898.

Promptly at 8 P.M. the first session of the Fifty-fourth Annual Meeting of the American Institute of Homœopathy was opened in the Congregational Church, corner of Nineteenth and Davenport Streets. The evening was a very hot one, and though the edifice stood almost at the brow of the hill and a stiff breeze was fitfully blowing, the heat was oppressive. Notwithstanding this there was a good gathering of the membership and friends.

After the organ prelude, President A. R. Wright, of Buffalo, said: "The Fifty-Fourth session of the American Institute of Homœopathy will now come to order; we will call upon the Rev. Dr. Warfield to open with prayer."

After prayer, and another organ selection, Dr. O. S. Wood, Chairman of the Local Committee of Arrangements, took charge of the exercises.

ADDRESS OF WELCOME BY DR. O. S. WOOD.

Mr. President, Members of the American Institute of Homœopathy, Ladies and Gentlemen:

We regret very much that we have not room enough upon this platform to invite all the ex-Presidents of this Institute to be seated with us; but they will have to content themselves among the audience.

It affords me great pleasure to-night, on behalf of the medical fraternity of Nebraska, and we must include Iowa, to welcome the American Institute of Homœopathy to Omaha—something we have long anticipated and have finally accomplished.

It was thought that our city was too young and too small to entertain a society of such magnitude. It is true that this is the youngest city that has ever had the honor of entertaining the American Institute of Homœopathy, and we feel proud that we are big enough and strong enough to do so. We consider this but a small thing in comparison with some others that we have accomplished in these latter days, and it makes the entertainment of you, to us, a small matter. We are not to-day what we were only a few years ago, when you used to hear of us as dirty, muddy Omaha; when it was true that our swaddling clothes were nothing but mud, and our drapery, dust. But we have

come up out of that; we have on, to-day, our metropolitan dress, and we are not ashamed of it.

It is hard, sometimes, to get out of our minds our first impressions. Your first impressions were made away back some thirty or forty years ago, when Omaha was in its infancy, for it is not yet half a century old; it has been born since the most of you doctors drew your first breath, and since some of you began the practice of medicine. Of course, there are no ladies here so old. We are proud to present to you our beautiful city; and it is no longer a reproach, as those of you know who have visited us from time to time. Undoubtedly many of you expected to see us as we were some eighteen or twenty years ago, and more especially, perhaps, what we were many years before that. Omaha used to be a city that was shunned; people were invited to go around it. John G. Saxe one time visited it in those days, in 1868 or 1869, and when he went home wrote something like this, and probably this is the impression that many of you still have:

Hast ever been in Omaha,
  Where rolls the dark Missouri down,
And four strong horses scarce can draw
  An empty wagon through the town?

Where sand is blown from every mound,
  To fill our eyes and ears and throat;
Where all the teamsters are aground,
  And all the shanties are afloat?

Where whiskey-shops, the livelong night,
  Are vending out their poison juice;
Where men are often very tight,
  And women deemed a trifle loose?

Where taverns hold an anxious guest,
  For every corner, shelf and crack;
Where half the men are going West,
  And all the rest are coming back?

Where theatres are all the run,
  And bloated scalpers come to trade;
Where everything is overdone,
  And everybody underpaid?

If not, take heed to what I say,
  You'll find it just as I have found it;
And if it lies upon your way,
  For God's sake, reader, go 'round it.

We have lived beyond that day. True, the dark Missouri still rolls down; but our many miles of well-paved streets no longer require "four strong horses to pull an empty wagon through the town"; and we have so corraled the sand that it no longer "fills our eyes and ears and throat"; our teamsters are no more aground, unless they get too intoxicated; and where all the shanties were afloat we have massive business blocks or palatial residences. But we must admit that still

there are too many whiskey shops, that the live-long night "are vending out their poison juice," but are under restraint, and men are not so often intoxicated. Our hotels no longer stand their anxious guests in the corner, nor lay them on the shelf, nor use them for chinks, and the half that were going West, and all the rest that were going East, came back again and helped swell our population from ten thousand then, to one hundred and sixty thousand now. Our theatres are run about as you run yours; our players come from the East. The bloated scalpers no longer come here to trade; Uncle Sam succeeds quite well in keeping them on their reservations. Politics is the only business, now, that is overdone, but everybody is well paid.

Nobody goes around us now—everybody is coming to Omaha, and we are very grateful that you have come. The *Boston Transcript* refers to Omaha as a "remote section of the country." Perhaps it has reference to that hot section. But we are not of that style to-day. No doubt many of your friends felt exceedingly anxious when they found you were coming to Omaha; that you would never return as civilized as when you left. Many of you, when you leave Omaha, will find yourselves in the West, beyond this; some of you will visit the Garden of the Gods, and, as you stand on the eastern side, before entering that wonderful gate that nature has made in those wonderful rocks, you will see a magnificent view before you; the curious formations, the sloping mountain side, and finally the snow-capped Pike's Peak in the distance. As you enter, your view widens and you become entranced, and you will instinctively feel like taking off your hat. In entering Omaha you enter the gateway to this vast West. You do not enter a Garden of the Gods, but upon the border-land of a garden that is nearest to that of Eden of anything this side of the original. As you go through our parks and along our streets, you will hear the singing of many birds, of which we have two hundred and twenty-five species, which are born and bred here and in the State. And as you pass westward you will see the beautiful flowers, of which we have many thousand varieties, scattered hither and thither, all along your pathway. It seems as though nature, when she created the earth, dropped all the rocks and stones in the East, and then opened her apron, and the eastern winds wafted flower-seeds all over these Western prairies of ours, and here they have bloomed for centuries before the foot of man trod the virgin soil that gave them life; and, in the words of the poet, we can truthfully say that "many a flower was born to blush unseen and waste its sweetness on the desert air." They lead you along to the foot-hills, up the mountain-slopes, to the very tops of the highest snow-capped peaks, where, at the edges of the snow-drifts, they will greet you with their smiles; they entice you down the westward slope, over the plains to California, where they are stopped at the Golden Gate by the Pacific Ocean.

The events of to-day give us a kindred feeling, that we have not possessed for many, many years; for our hearts are now in sympathy with down-trodden humanity, which we, as a nation, are trying to

relieve. And we of the West have plucked our fairest flowers from our Western homes in city and country and bedewed them with our tears, and sent them to join those plucked from your Eastern homes, and have bouqueted them with those of the sunny southland, and have sent them Lee-ward and for miles (Miles) away, to Cuba, to cheer the Cubans. We have clustered them at San Francisco, and loaded them into our battle-ships, for a well-honored merit (Merritt) to be transported through the Golden Gate to the Philippine Islands, where now it is dewy (Dewey) enough to keep them fresh and green, until Uncle Sam has ploughed the soil with his cannon-balls and raked it with Minié bullets and shrapnels, and sprinkled it with shot and shell, and has sown the seeds of American liberty and humanity, that shall bring forth fruit to the honor of God and for the good of mankind in general. "Then the islands of the sea shall bloom and blossom as the rose." And as we come to the Carolinas—we will simply send our merchantmen over with their Carolines and their Annas and their Marys, and we will teach them how to better dress, and how to be better housekeepers. And, since our flying squadron with its Commodore on the sly (Schley) has inveigled Cervera and his Spanish navy into Santiago Harbor, our Sampson has given them Hobson's choice—to surrender or be blown from off this part of the earth. Then, if Spain refuses to be "pacificos," we will form in one grand naval review, pass by Havana and its old Castle Morro, and sail our fleet, all stripped for war, over the Atlantic, and as we pass the Canary Islands we will stock them with nightingales and humming-birds; and on some fine morning early in July, just before the break of day, we will fire our national salute, with our 1,000-pounders on Cadiz and plant our flag upon its ramparts and on its terraces, with the largest chorus choir that ever assembled, with the cannon's boom for our bassos, and the roaring artillery for our altos, we will sing the "Star-Spangled Banner," and give Spain "Hail Columbia." So much for our flowers.

Now, while we have invited you to Omaha, we have no particular outside attractions; we have no St. Clair River on which we can float you to the Young American Venice; we have no Niagara Falls to which we can wheel you, but we have a muddy Missouri River that can cut more swells and get more people out in quicker time than the Niagara ever did. But we can show you more living curios to-day than any other city of our size—curios that were at the birth of Omaha. We can show you the first landlord who opened the first tavern; we can show you the first bride, a widow now, ready to be another bride; we can show you the first postmaster, whose hat was the first post-office; and he was our first letter-carrier; we can show you the first doctor that ever prescribed for the first patient in Omaha, a little pappoose, down about where the Union Depot is. It died, and he was so discouraged that he quit the profession and went into the newspaper business and made a successful editor. Now he holds a government office in Omaha. Surely he was not an homœopathist.

We have among us many things that are peculiar. But we have

something better to show you: true Western hospitality, and it is this to which we invite you. We have, as a local committee, done our best to make everything as pleasant and as entertaining for you as possible. We have secured, through the courtesy of our Allopathic Faculty, one of the most convenient places for you to meet in—the John A. Creighton Medical College—in which to hold your sessions. And we have, which is the greatest thing of all, the Trans-Mississippi Exposition, which we can show you. We greet you to all these and everything else that is good and enjoyable. And that you may be protected while you are here, our citizens have taken great trouble to prepare the way for you. We have two mayors; two sets of fire and police commissioners (we are trying to get rid of half of them). The mayor we have with us this evening, and who is to follow me, has given away the keys of the city so many times of late, that we cannot keep anything locked—everything is open. But you need have no fear; you will not be hurt. If you do feel unsafe, the best advice we can give you is to "keep in the middle of the road," and nobody will harm you.

And now, doctors and visitors to the American Institute, in behalf of the doctors of Omaha and Nebraska, and of Council Bluffs and Iowa, we extend to you our greeting, and we give you freedom to our homes; and while you stay in our borders we trust you will feel yourselves perfectly at home, and feel that you are welcome, and that we have asked you here because we have wanted you, and we ask you to accept our hospitality—the best we have been able to prepare.

I now have the pleasure of introducing to you the Hon. Frank E. Moore, our Mayor of Omaha.

The Hon. Frank E. Moore, Mayor of the city, was then introduced, and read a formal welcome to the members of the Institute, in which he reviewed, in eloquent language, the rise of the Homœopathic School and its popular favor at this time; especially its recognition to an equality before the law in Nebraska. He said, in conclusion, that the Omaha people, most of them, came from the East. It is with great pride, he said, that he invited the members to investigate for themselves the beautiful new White City—the Exposition—and see if it will not compare favorably with the great Columbian Exposition at Chicago. "When you take into consideration," he said, "that Chicago had over ten millions of dollars and three years of preparation in which to produce their great Exposition, and we had less than one million of dollars and but one year, you will give us due credit for the Exposition which you will find right at our gates." He enumerated some of the things for which Nebraska was noted in a commercial way, and also spoke of the third largest cattle market and packing house in South Omaha—the other two being Chicago and Kansas City. He referred to war with Spain, speaking of the noble men who had already gone to the front, and to another regiment now forming, under the command of William J. Bryan.

He congratulated the country on having at last wiped out the Mason and Dixon line, and felt sure if any of the European powers dared interefere "we can lick any darn country in the world!" In conclusion, he presented the Institute with the keys of the city, which were decorated with the national colors and inscribed, "American Institute of Homœopathy, Omaha, June 23, 1898."

The Hon. Silas J. Holcomb, Governor of Nebraska, was next introduced and spoke at some length.

He began by referring to the keys of the city which the Mayor had just given the Institute, saying: "While the suspicion crossed my mind, I thought at first I would say nothing about it; upon second thought, as it is my disposition to be fair with all people, I was inclined to just simply mention the matter. I discover, upon closer scrutiny, that these keys are given you in duplicate. I was considering for quite awhile why that was—why the city of Omaha had need for two keys. It has been my first opportunity conjointly with his honor the Mayor in giving an address of welcome, and in consequence I am somewhat in ignorance as well as you are. The only conclusion that I can come to was that in these welcomes which we are trying to extend to our visitors from all parts of the country during the Exposition, as is well known, we of the West never do things by halves, and in order that the keys might be given to you and there might be no question about it, we gave you two keys instead of one. Of these two keys one will lead you into places of pleasure and enjoyment and profit and knowledge, and perhaps the other into places where you would not have those substantial comforts and best means of enjoyment that we ought to cultivate and secure. I can't distinguish them, or I would gladly do so. I will have to leave it to your good judgment. I am satisfied that you will be able to secure the right key, and that you will enjoy yourselves while you are visiting among us."

The Governor spoke at some length, reviewing the growth of the State and the inauguration of the Exposition. He had many kind things to say of the homœopathic school of medicine; he touched, in a patriotic way, the present conflict with Spain. And he repeatedly welcomed the Institute to Nebraska and indulged the hope that our stay would be pleasant and instructive, and that we would all of us carry away a good impression of Omaha and of the great State of Nebraska.

Dr. Wood then read a letter of regret from the Governor of Iowa, who had been expected to be present and take part in the welcome.

An original composition by Dr. Charles Gatchell of Chicago, entitled "We will not Forget," and set to music, was then sung by Miss Van Ewen, with organ accompaniment. Dr. Gatchell being called for, was invited to a place on the platform with the speakers.

Dr. Wright thanked the several gentlemen who had extended the welcome to the Institute, and then, calling Dr. Gatchell to the chair, presented his address as follows:

Dr. Wright's Annual Address.

Ladies and Gentlemen of the American Institute of Homœopathy:

We meet for our Fifty-fourth Session. We come with words of cheer on the lips of everyone. As we look into familiar faces of past years, a smile of welcome and a hearty hand-shake is extended to each and all. This is no ordinary greeting, as it comes from men and women engaged in a common pursuit, with its cares, pleasures, and anxieties. We welcome, then, each one of you as friends and fellow-workers, assembled this evening to inaugurate the work of this session for the advancement of our noble profession. And to those who have not met with us before, the welcome is just as cordial. In reference to members elected at this session I would make a greater advance, and request that those who indorse their application, make it a point to introduce each one to the members present. And do not wait till they are voted in to-morrow, but begin to-night.

It is a pleasure to stand before you and express my thanks for the honor you have conferred on me in selecting me to preside over the deliberations of such a distinguished body of men and women. This mark of your confidence and esteem is highly flattering. The attainments of this Institute at the present time stand high in comparison with other scientific bodies. If you take a glance at some of our Transaction volumes of early years, you will note the progress this society has made in all departments of medical science. With our excellent organizations and our alertness in scientific work, there is every reason to believe that we shall continue this progress and maintain a relatively high position with similar societies of the world.

A by-law of the society makes it a duty of the President, in an address, "to make such suggestions as he may deem necessary for the Institute to take action on during the session."

The finances of this society make an item of perennial interest. For a few years past the reading of the Treasurer's Report has caused no little depression, but, through the unceasing efforts of these two officers to collect the dues of the society, we have the pleasure of announcing from them, the thousand dollar deficit of last year wiped out, three hundred dollars paid for two parts of the Repertory of the Cyclopedia, and "every bill paid." FREE FROM ALL DEBT is a good condition for beginning the year, and, in providing for the future, I wish to call your attention to one point. It is absolutely imperative that we resort to some means to prevent, if possible, the dropping off of new members. We find, on examination, nearly thirty-three per cent. of those who joined the Institute in 1893 dropped out before 1897. Exact figures are 49 to 153. This condition warrants me in

recommending what has before been proposed to the Institute; that members do not receive a certificate of membership till after they have paid dues for four consecutive years. To meet the objection that has been made to this procedure, a clause might be added to the receipt for initiation fee, the words, "entitling him to membership."

I may surprise you by suggesting no changes in constitution or by-laws. Many changes have been proposed in the current medical journals of the year, and, supposing them all to be made for the best interests of the Institute, I have endeavored to give each one coming to my notice an impartial consideration. The one proposing to go back to the plan of holding our sessions from Monday to Saturday I have considered more favorably than any others. Many good workers in the Institute urge it, but it seems to me impractical unless the present plan is so changed as to allow three sections to report at the same time; or, unless we return to the old plan of having two sections at a time continuously, and have no section to appear before the whole Institute. In this way the whole work of the Institute might be brought within five days, but for obvious reasons I would not recommend either plan, as I believe the present plan for the present volume of work is the best.

There are some other subjects which I consider of sufficient importance to refer to as briefly as possible, and the first to present itself is

Medical Expert Testimony.

The taking of medical expert testimony in many cases of criminal trials has proved to be a farce and a scandal of justice, as forcibly illustrated in the past year in the Luetgert trial at Chicago and the Benham trial at Batavia, N. Y. In one State, at least, an effort has been made to change the method of procuring such testimony, and to insure its being non-partisan and unbiassed. I would recommend that your Committee on Legislation be requested to assist in promoting State legislation on this subject, providing that medical expert witnesses shall be chosen by the court or some competent State authority outside of the medical profession, and paid for such services by the county; and further, that in the choice of such witnesses the law shall not discriminate in favor of any school of medicine. Second:

Uniformity of State Licensure.

The question of uniformity in the requirements for license to practice medicine in the different States is a difficult one to solve. There has already been interstate friction from varied requirements; and from the nature of the case we can readily perceive that there may be much more. As a matter of justice to licensed physicians who may wish to move from one State to another, uniformity of licensure should prevail. In the comprehensive and excellent report of the Interstate

Committee to the Buffalo meeting, the ninth article recommends that the chairman of the committee correspond with secretaries of State registration boards to get from them a definite expression on this important matter. Assuming, as we surely may, that the responses from these boards will be unanimously in favor of securing uniformity of State licensure, we may be allowed to take action accordingly. The object of the ninth article of the Interstate Committee's report appears to be only to get an expression from the State boards on uniformity of licensure. Again, the Inter-State Committee has very heavy duties imposed on it in another direction. Under these circumstances I would recommend that a committee be appointed to consist of one medical examiner or of one person directly interested in licensing, from each State, to co-operate in endeavoring to secure uniform requirements for licensure of physicians in the different States. Third:

Forestry.

I wish to call your attention to a subject which is eminently entitled to our consideration, though it is not directly in the sphere of our work or investigation at the present time. It has undoubtedly come to the knowledge of all present that the clearing of the forests of our country has, in some localities, seriously threatened the water-supply and increased the damage from freshets. The Forestry Commission in the Department of Agriculture at Washington is making a systematized effort toward a future improvement in surface conditions in territory so affected, and if, through the efforts of this commission, the hill-tops of the country may be covered with natural forest trees, our sanitary conditions and prospects would be greatly improved. I do not consider this a subject for any committee work; but, as this Institute stands committed to all improvement and reform in Sanitary Science, I would recommend the passage of the following resolution, viz., That the members of this Institute will, as opportunity may offer, assist in securing legislation for the preservation of forests, and for the reproduction of them wherever needed. Fourth:

The Hahnemann Monument.

There is a subject on which this Institute is to be congratulated, viz., the completion of the Hahnemann Monument in a manner that must challenge the admiration of every member. As a work of art, I predict that this monument will rank among the first in the country. The thoughtful expression of the features, the attitude of the figure, the graceful simplicity of the drapery, and the classical dignity of the entire work seem quite appropriate to the venerable subject. The committee in charge of the work and the sculptor are to be complimented on a perfect success. All that remains to put it in place in Washington is the almighty dollar. It cannot be possible that the

Homœopathists of this country will withhold this. I believe one sight of the bronze will bring the necessary $5 from each one. And since the ladies have formed the Ladies' Hahnemann Monument Association we have faith to believe that the necessary funds will soon be forthcoming. Fifth:

CURANTER.

There is another subject I would mention, which though small in appearance should receive attention; that is, the use of Curanter or Curenter in the phase which this Institute has adopted as its motto. The Institute on its seal uses one form, and the Hahnemann Monument Association, an organization of the Institute, uses the other form on its literature and on the bronze monument. Any Latin scholar can recognize the difference in signification of these two words, and all Homœopathists should unite on the use of one form. I will not discuss the subject, but propose that a committee be appointed to report on it at the session of 1899. Sixth:

THE TRAINED NURSE.

Realizing myself, as you all do, the immense practical benefit of the trained nurse as a necessary adjunct to the physician's practice, I believe we should recognize in some manner the Training School for Nurses in our annual programme. Last year Dr. H. Pomeroy, of Cleveland, in a paper on the "Relation of the Physician and the Obstetric Nurse," concluded by saying: "In my judgment it would be wise to devote a section, or at least a portion of the time of the future meetings of the Institute, to the consideration of and discussion of the interests pertaining to the training schools for nurses." Dr. J. T. Cook, of Buffalo, in an interesting discussion on the same subject, indorsed Dr. Pomeroy's suggestion. I would therefore recommend that provision be made for the reading of one paper in the Section of Obstetrics, on some subject pertaining to the trained nurses' work, and that a committee be appointed to make a brief report each year on Training Schools for Nurses. Seventh:

MATERIA MEDICA.

Now let us come to the item that is first in importance to this society and dear to the heart of every Homœopathist, our Materia Medica. In the early years of the American Institute its principal thought and work was on Materia Medica and Clinical Medicine. And good thought and good work it was. Very soon the necessities of our conditions, as a school, developed excellent surgeons, until at the present time in General Surgery, and the Surgery of the Specialties of the Eye, Ear, Nose, Throat, Gynecology, etc., it ranks with the best. But these,

and also the commendable work in the collateral sciences, have absorbed so much of the time of our sessions that Materia Medica has been partially obscured and apparently relegated to second place. Yet the same men are working as ever, the Committee on Drug-proving has done good work, and the Materia Medica Conference has shown a faint renewal of interest in Materia Medica, but the majority of the profession have not given it the attention which its importance demands. Yet how shall we effect a revival? Only by increased activity in work. The lamented J. P. Dake agitated for several years a plan for a National Provers College. But the scheme involved so much work and capital that it was impractical.

The compilers of our cyclopedias deserve the gratitude of the age for their indefatigable labors. The resulting volumes need a large weeding out of material not really useless, but not considered necessary. A reproving of our present Materia Medica has been considered but never undertaken.

Drug-proving at the present time may be made more satisfactory than that of twenty-five years ago. Through discoveries in chemistry and electricity, the use of new instruments of precision for physical examinations, etc., physical conditions and pathological changes which could not be discovered at the time most of our provings were made, are now possible of being noted with great precision. With this assistance much chaff might be eliminated and perhaps valuable symptoms added. What a grand work for this Institute to accomplish; but I fear about as utopian as Dr. Dake's Provers College. I have called your attention to this subject for suggested action in another direction. Many of you can count up at least fifty entirely new remedies that have been brought to your notice through our medical journals in the last decade. Very few of them have any reliable proving, nearly all being used first empirically and some adopted in clinical use. Many of these might become a valuable addition to our Materia Medica if the general membership could be enlisted in the work of proving a selected number of them, under the direction of the Committee on Drug-provings, or any other committee chosen for the work. With reliable provings of these, we would enrich our Materia Medica and greatly increase the pathogenesis of each of these newly selected remedies. We have such a perfect system of Materia Medica that the addition of any number of properly proved remedies cannot destroy its harmony. Our existence, as a school of medicine, depends on our maintaining and enlarging our Materia Medica. The demand is on us to do this as a material benefit to medical science. The changing attitude of the dominant school toward us has been marked during the past year by the number of overtures that have been made by prominent members of that school to homœopathic physicians to come over and join their society. I know that your answer would be that when we go we will carry our armament with us. That is distinctly and emphatically our Materia Medica. As we prize it, let us enrich it with additional, reliable provings, so that when future generations

of this society make pilgrimages to Washington to see the classic bronze we have builded in honor of Homœopathy and its founder, they will take just pride in their loyal ancestors of the nineteenth century.

The Secretary has presented you a programme of unusual interest. All the bureaus have been lavish in the expenditure of time and research on the subjects presented, and their papers and discussions must prove attractive. Some of them will make a new departure in the manner of presenting their material, which we believe will prove a great success and merit your approval. This is the kind of enterprise that makes the American Institute a living power for the advancement of the profession. As loyal Homœopathists assembled in council, we are confident that your intelligence, good-fellowship, and scientific aspirations will prompt you to put forth your best endeavor to make this session the most practical, beneficial, and harmonious reunion the Institute has ever witnessed.

Fellow-members of the Institute, in assuming the duties and responsibilities of the chair I rely on you to assist me in despatching the business of the session with promptness and celerity, but giving each subject due time for discussion. I also beg your indulgence for any shortcomings or possible mistakes I may make in presiding over your deliberations.

At the conclusion of the reading the Second Vice-President appointed as a committee on the address, Drs. Dudley, Dewey, and Strickler.

The report of the Executive Committee was then called for and presented by Dr. E. H. Porter, as follows:

Report of the Executive Committee.

The Executive Committee would respectfully report that all the routine duties assigned to it by the By-Laws have been discharged. A special meeting of the committee was held in February, 1898, at 181 West Seventy-third Street, New York City, and the programme for the Omaha meeting carefully considered. Every effort has been made to keep in touch with the Committee of Local Arrangements, and the best interests and convenience of the Institute have been kept steadily in view. It will be found that every section has been given one meeting before the Institute, and the other meetings are as numerous as the time limitation would permit. An unusual effort has been made to provide for full discussion of topics presented, and the majority of the sections will present well-considered and systematically arranged programmes.

The General Secretary has made some marked departures from custom in the editing of the volume of Transactions for 1897. Many pages were saved by taking out "leads" and printing the body of the

book as "solid" matter; the abolishment of tabular matter and new arrangement of various reports effected much saving, so that the expense for 1897 was nearly $1,000 less than that of 1896. The programme and order of business may be found in full on the annual circular recently distributed among the members. We respectfully recommend that it be accepted as the order of business of this session.

A. R. WRIGHT, M.D.,
President.

E. H. PORTER, M.D.,
Secretary.

Upon motion, duly seconded, this report was referred to the Publication Committee, and the order of exercises provided adopted as the order of the day.

Dr. Porter next presented the Report of the Committee on Publication:

REPORT OF THE COMMITTEE ON PUBLICATION.

Your Committee on Publication would respectfully report that it has done its duty, and the TRANSACTIONS of the American Institute for 1897 is the result. In scanning the papers and discussions, the rules for guidance were found in By-Laws, Article 9, Sec. 4, and Article 3, Sec. 5, and the Resolution adopted by the Institute at its Buffalo meeting.

In addition, it was unanimously decided, 1st, that preference should be given to papers presented, read, and discussed; 2d, papers read by title, and referred to the Committee on Publication, if they were in the hands of the Secretary at the close of the sectional meeting; and 3, if the volume limit permitted, those papers listed on the programme, but not in the hands of the Institute nor coming to the Secretary until after the adjournment of the session.

In addition, certain lists were stricken out so as to bring the compass of the book within the 900 pages designated. There was some delay in the Committee's work, by reason of an infraction of the rule found in Article 3, Sec. 5. There was no difference of opinion on the part of the Committee members, and all action was unanimously taken.

The General Secretary and Treasurer will show you the financial saving to the Institute, and it is believed that the general appearance or worth of the volume has been in no wise injured or lessened. Whatever of criticism may have been evoked—and certainly it was expected, is in the main due to an ignorance or disregard of a fundamental law governing your organization. Regarding the report ordered by the standing resolution of 1892, the Committee felt that already it had been given wider publicity through the medical journals than was possible in the TRANSACTIONS, and especially as such pub-

licity was prior to the Committee's work, and that for this year it could be omitted.

Leaving the result in your hands, and trusting to your judgment as to what is best for the entire profession, the Committee has confidence in your verdict. (Signed)

THEO. Y. KINNE, *Chairman.*

The Report was accepted and ordered referred.

At this point, the hour being now late, and the heat still very oppressive, on motion the Institute adjourned.

SECOND DAY—MORNING SESSION.

Friday, June 24, 1898.

On reassembling in the amphitheatre of the Creighton Medical College this morning, President Wright said, before taking up the programme of the morning:

I wish to say a word on a point of personal privilege. For several years you have had an able, scholarly, and eloquent address at the opening of each session. This year there is to be an innovation. There will be no such address. Soon after assuming the duties of the office I received a serious injury, from which I have not entirely recovered. Up to the present time I have done but little professional work, and have not felt equal to the task of writing out a suitable address for this occasion. Yet I am very happy in being able to take my place with you this morning.

In arranging and perfecting the business matters of the society I have endeavored thus far to discharge all the duties of the honorable position in which you have placed me, and for this failure on my part I offer a humble apology and ask for your kind indulgence for any defects that may occur in my duties as your presiding officer. As we are all working here for one common object, the benefit of our chosen profession and a mutual improvement in science and art in the practice of that profession, we may expect an entirely enjoyable session from beginning to end.

There are many here who are strangers to one another, and, to facilitate acquaintance and recognition of merit, I would like courteously to announce the name of each speaker in any discussion, and hope each one will not consider it out of place to kindly give me his name on rising to speak.

A number of Committees were called for, but none responding, doubtlessly owing to the early hour, the President proceeded to fill vacancies in Standing Committees.

On the Committee on Resolutions he appointed, in addition to the regular appointees, the following: Drs. A. P. Williamson and Sarah J. Millsop.

To the Committee of Organization, Registration, and Statistics were added Drs. C. B. Currier, J. M. Walker, and Sara J. Allen.

To the Committee of Medical Legislation he added the following: Drs. A. K. Crawford and W. D. Foster.

The Report from the International Bureau of Homœopathy being called for, the following was submitted:

In accordance with the recommendations made by the President of the Institute last year, this Bureau was appointed. As is often the case when work asked for is assumed, the Bureau soon found that more was involved in the task than was at first conceived. This was especially apparent when they commenced to realize the great possibilities of the influence of the Institute when it attempted to set a pace for the world, though the Bureau insists that the world does not present a field too great for the Institute as the representative of the School of Homœopathy.

At this meeting we can only report progress, the progress consisting in outlining the work for the coming year, and we hope that you will be lenient in your criticisms, as we cannot expect to attain the ultimate object of our ambition, excepting as the result of carefully considered plans and work diligently pursued.

The plan agreed upon is briefly as follows: After careful investigation, a corresponding member will be chosen in the medical centre of each country, the continuation of recognition by the Committee depending upon the willingness of the one appointed to furnish as complete a list as possible of the homœopathic physicians in the country represented, when possible, giving the date and place of graduation of each practitioner. By notifying the journals of the country, it is hoped that these lists, by frequent revision, can be kept reliable. There shall also be furnished a list of the laws governing medical practice in the several countries, and a list of the laws regulating the practice with relation to the State, Army, and Navy, as well as to the supervision of medical education.

In return for this information the Bureau will furnish like data from the United States. All of this material will be submitted to the Institute, and, if found to be of sufficient value, printed in the TRANSACTIONS, or in pamphlet form for distribution.

Further than this, it is proposed, with the co-operation of the colleges, to keep in Washington a list of all homœopathic graduates, who will be requested to notify the Bureau of any change in address, as well as of official appointments received. The object of this is that we may have the means of furnishing information when assistance is required for State or national legislation.

Beyond this, possibly the most ambitious aim of the Bureau is the

recognition of the diplomas of homœopathic institutions by foreign governments. In other words, to bring about a reciprocity in medical diplomas between the United States and foreign universities and colleges. This is a necessity because of the meagre facilities offered abroad for the education of homœopathic physicians.

Because of the small amount of work accomplished this year the Bureau is in no way discouraged, as work is better done after careful consideration of the means and methods to be employed. During the last few months they have hesitated to begin any active work, because of the change promised in the policy of the Government and in the ambition of its citizens as a result of the present war. The value of the American diploma, American precedence and examples will be enhanced when the Government is recognized as a great power prepared to maintain, by force, if necessary, her judgment in the affairs of nations. We feel sure that our School, which has always been in the front ranks in progress, will go with the Government as an exponent of the benefits of freedom and an exemplification of the beneficence of republican institutions. As the Institute is the one representative body of the School, it must assume the work.

We have no hesitation in promising that before another year has passed this Bureau will have proved its value, and be able to present a concise report of the condition of Homœopathy in the world.

J. B. Gregg Custis,
E. H. Porter.

On motion, this report was referred to the Publication Committee.

A partial report was made by the Chairman of the Committee of Arrangements, Dr. O. S. Wood, which consisted, in chief, of an invitation to visit the art galleries and attend the reception of Mr. Lininger this evening.

Dr. Peck, of the Board of Censors, read the names of thirty applicants for regular membership, and three names for Corresponding Membership.

Dr. Fisher desired information concerning the three candidates for Corresponding Membership. If it be not contrary to the rule, he would move a committee to report to-morrow morning, having this matter in hand for investigation.

Seconded by Dr. Van Baun.

Dr. T. Franklin Smith submitted that we have a Board of Censors elected for that very purpose. He would amend, therefore, that these three proposed names be referred back to the Board of Censors.

Dr. Dudley said that the Secretary would confirm him in his statement that the Institute appointed a committee last year or the year before, with Dr. Henry M. Smith at its head, on the subject of Corre-

sponding Membership. If that be so, there was no need for a special committee. Was it not understood, when that committee was appointed, that all propositions for corresponding members should come through that committee?

The President: Yes, that is right.

Dr. Dewey: In presenting these names, I asked the Chairman of the Committee to which Dr. Dudley refers if there was not a committee for such purpose. He said there was no such committee, and advised me to report to the Censors. The Transactions do not mention that Committee. Therefore I referred it to the Board of Censors.

Dr. Porter: My recollection of the action of the Institute in this matter is that two years ago a committee was appointed to consider the matter of electing honorary and corresponding members. The idea at that time was that we would elect a large number of Corresponding Members. The life of that committee expired with the expiration of that year; so there is no committee now in existence on this subject.

Dr. Runnels seconded Dr. Fisher's original motion for the appointment of a special committee.

Dr. Smith withdrew his amendment.

The question being then called and put, resulted in the carrying of the resolution, and the President appointed Drs. C. E. Fisher, J. C. Wood, and W. W. Van Baun.

The Treasurer's Report was presented by Dr. T. Franklin Smith, Assistant Treasurer, in the necessary absence of Dr. Kellogg, as follows:

The Treasurer deeply regrets that illness in his family prevents his attendance at this session of the American Institute, for the second time in thirty-three consecutive sessions. He desires, however, to congratulate the Institute most heartily upon the financial report which the Assistant Treasurer is able to present. It shows the wisdom and efficiency of the policy of retrenchment urged at the last two sessions, which has wiped out all its indebtedness and placed it on a sound, more than self-supporting basis. For, not only have we met all the current expenses of the last year, but we have also paid off arrearages of debt amounting to some sixteen hundred dollars. More than that, we have also paid for two parts, half of the proposed issue of Dr. Hughes's "Repertory of the Encyclopedia of Drug Pathogenesy," and also have paid $300 on the Institute's subscription to the Hahnemann Monument. The cost of printing the volume of the Transactions has also been reduced about one thousand dollars. Your Treasurer feels especial pride in this satisfactory fulfilment of the statement and promise made by him a year ago. The unusually large amount of unpaid dues then

outstanding compelled the Assistant Treasurer to resort to extraordinary efforts to collect; and although his persistent appeals may have caused some annoyance and irritation, we all have reason to be gratified, and to thank him for the result accomplished.

The Treasurer also desires thus publicly to thank Dr. J. Wilkinson Clapp, of Boston, for his very efficient and self-sacrificing services in managing all the details of receiving, handling, and selling the "Cyclopedia and Repertory," thus relieving the Treasurers of a large burden of work. I would recommend that the Institute also recognize the value of his services by a formal vote of thanks.

All of which is respectfully submitted.

E. M. KELLOGG,
Treasurer.

Treasurer's Report.

NEW YORK, June 17, 1898.

The American Institute of Homœopathy, in account with EDWIN M. KELLOGG, Treasurer, and THOS. FRANKLIN SMITH, Assistant Treasurer.

Receipts.

By Balance from last year,	$380.20
" Cash received from Dues,	6,848.00
" Cash received from the Sale of Hughes's Repertory,	165.20
	$7,393.40

Disbursements.

To Transportation Committee,	$31.00
" Interstate Committee,	14.00
" Materia Medica Conference Committee,	10.00
" Sherman & Co., due for TRANSACTIONS, 1896,	1,580.81
" Hahnemann Monument Fund,	300.00
" Bills for Miscellaneous Printing,	297.10
" Bill for Printing Certificates,	24.00
" Bill for Engraving Certificates,	40.00
" E. H. Porter, Salary of Secretary,	1,000.00
" E. H. Porter, Postage of Secretary,	104.56
" Frank Kraft, Salary & Stenographic Expenses,	433.65
" Treasurers' Expenses to Buffalo,	129.80
" Treasurer, Postage and Sundries,	267.65
" Committee on Organization, Registration, and Statistics,	160.79
" E. Gould & Co., Parts I. and II., "Repertory of Cyclopedia,"	307.27
" Trow Directory Co., Printing TRANSACTIONS of 1897,	2,152.15
" Expressage on TRANSACTIONS,	395.19
" Rent of Storage Room,	60.00
Balance to new Account,	85.43
	$7,393.40

At the conclusion of the reading it was referred to an Auditing Committee consisting of the following: Drs. S. P. Hedges, C. B. Currier and D. H. Foote.

At a later period during the sitting of the Institute, this committee brought in the following report:

OMAHA, NEB., June 24, 1898.

The Auditing Committee, to whom was referred the accounts and vouchers of the Treasurer, have examined them and the books of the Treasurer, and find them to be correct in every particular.

S. P. HEDGES, M.D., *Chairman,*
C. B. CURRIER, M.D.,
D. H. FOOT, M.D.

Dr. Smith then explained to the Institute a mistake touching the initiation and dues of the Institute, which had been published in some of the journals as emanating from the Board of Censors. According to the By-Laws, no one is a member of the Institute, and no one can receive a certificate of membership or have his name enrolled in the list of members, until the $2 initiation fee, as well as a year's dues, $5, amounting in all to $7, are paid.

On a call for New Business, Dr. Fisher presented the following resolutions, which were referred to the Committee on Resolutions *pro forma:*

Resolved, That the American Institute of Homœopathy, having the honorable distinction of being the oldest national medical society in the United States, with two thousand members, and representing a profession of full twelve thousand, with large numbers of educational institutions, State, county, and municipal hospitals, and hundreds of corporate and private institutions of like character under its paternal supervision, views with satisfaction the fact that the present struggle between our country and Spain has resulted in the partial breaking down of the barriers which have heretofore excluded members of the profession from the military service of the United States.

Resolved, That in the mustering-in of a goodly number of Homœopaths as army surgeons—to wit, Drs. Terry and Ashley of New York, Adams of New Jersey, Adams, Roberts, Willard, and Wall of Illinois, Caine and Cole of Minnesota, Eaton of Iowa, recruiting surgeon for the regular army, and others whose names are not now recalled—the Government has but performed a just duty toward a competent and loyal profession, and whereby we are now able to refute the staple though

hackneyed argument that "Homœopathy is not represented in the medical service of the Army."

Resolved, That a special committee of five members of this Institute be created for the purpose of petitioning the President of the United states and his Cabinet and the American Congress for the more general, just, and permanent enlistment of members of the Homœopathic profession in both army and navy service.

SECOND DAY—AFTERNOON SESSION.

At this session the Board of Censors read the names of twenty-one candidates for membership, which were ordered posted.

A number of committees were called, but no response being made, the business meeting of the Institute then adjourned.

THIRD DAY—MORNING SESSION.

Saturday, June 25, 1898.

Immediately upon assembling, the Board of Censors made report of fifty names which had been duly posted and were now recommended for election. It was so done.

The President appointed as Election Committee the following: Dr. A. P. Williamson, Dr. W. A. Dewey, and Dr. Eldridge C. Price.

For a Committee on place for next meeting of the Institute, the President appointed the following: Drs. J. B. Gregg Custis, O. S. Runnels, W. W. Van Baun, S. S. Smythe, and C. B. Kinyon.

On call, the Chairman of the Interstate Committee, Dr. A. B. Norton, stated that the credit of almost all the work done in this Committee up to the present was due to the efficient secretary, Dr. Allison Clokey, of Louisville, who was unavoidably absent. He further stated that the Committee had had one session yesterday morning, and will hold another some time to-day. Meantime he presented the following report, which was accepted:

Preliminary Report of the Secretary of the Interstate Committee for the year 1898-99.

The work of the undersigned Secretary of the Interstate Committee began with the receipt of a letter, shortly after the holidays, from

Dr. A. B. Norton, New York, Chairman, requesting him to serve as Secretary, vice Dr. Mary F. Cushman, resigned.

After advisory correspondence between the Chairman and Secretary, the accompanying circular, designated as No. 1, was issued on the 8th day of April, 1898, to the honorary vice-presidents and honorary secretaries of the Institute, as published in the last Transactions. On a subsequent date a copy of the same circular was furnished to each one of our journals.

As the result of immediate correspondence between the Chairman and the Secretary, it was determined to utilize the type-form from which circular No. 1 was printed, to print circular designated as No. 2, with a few alterations, which would make it suitable for circulation among the delegates to the Interstate Committee.

Along with this circular No. 1 to the honorary vice-presidents and honorary secretaries was sent a blank form, a copy of which is appended, to be filled out after the next annual meeting of the different State societies, and to be returned immediately to the Secretary of the Interstate Committee, from which filled blanks the list of delegates to the Interstate Committee has been compiled.

As rapidly as these filled blanks were returned, giving the list of delegates of the Interstate Committee, circular No. 2 was issued. Inasmuch as the reports from several States have been only quite recently received, some of these circulars No. 2 were considerably delayed.

On May 11th the Secretary received a letter from Dr. Norton, Chairman, dated May 9th, calling his attention to the importance of army and navy appointments, and suggested that he send, without further delay—not waiting for further conference with the Chairman—a short letter to the journals upon the subject of these appointments, asking them to publish the same in their next issue, and making a request that any member of our school, who had applied for a position as surgeon under the Government at the present time, would communicate with the Secretary at once. In accordance with this correspondence, the Secretary, on May 11th, sent an open letter to the homœopathic journals, with the appropriate request, as indicated in the Chairman's letter of May 9th. It has undoubtedly been noticed that these open letters were very kindly given space by the journals to which they were sent.

At this point it became necessary that the Chairman and Secretary definitely outline the work to be pursued at Omaha. After considerable correspondence in regard to the matter, it was decided to make the army, navy, and marine hospital appointments the foremost matter of discussion at Omaha. In order to bring this matter prominently before the profession in some form which would be practical, it was decided to invite the assistance of our homœopathic colleges. Accordingly, on May 28th, a communication was sent to the registrars of each of our colleges, requesting that they offer a scholarship, in accordance with the terms of the communication, to those students who

desired to prepare themselves for and enter into the army, navy, or marine hospital service. To this communication some replies were received. All of the colleges will undoubtedly report in regard to the matter at the following meetings of this Committee.

On June 9th, certain States not having been heard from, the Secretary sent the accompanying letter to the secretaries of the societies in these States, asking for an immediate report with names of delegates.

It is the recommendation of the officers of the Interstate Committee that the matter of army, navy, and marine hospital appointments be given paramount importance over all other matters during the following sittings of the Committee. This to be followed by matters of more local interest to the several States and of general interest to the American Institute.

ALLISON CLOKEY,
Secretary.

A. B. NORTON,
Chairman.

The Institute voted that adjournment be at 2 P.M.

At this point DR. H. M. SMITH, Necrologist, presented his report as follows:

REPORT OF THE NECROLOGIST, HENRY M. SMITH, M.D., NEW YORK.

Since the last meeting of the Institute, the deaths of twenty-one members have been reported, of whom eight had been associated with us for periods of twenty-five years and over. It will be noticed that some of the deaths occurred prior to our last meeting. Arranged in alphabetical order, they are:

BARNETT, SARAH AMELIA, of New York, was elected a member of the Institute in 1881; died December 26, 1897, in the eighty-fourth year of her age.

BIRDSALL, ASAHEL HOUGHTON, of Brooklyn, N. Y., was elected a member in 1887; died August 8, 1897, in the forty-sixth year of his age.

BOJANUS, C., of Samara, Russia, was elected a Corresponding Member in 1887; died May 28, 1897. He will be remembered by many of us as an honored guest at our World's Congress at Chicago in 1893.

BOWERMAN, MARTHA ALMINA, of Chicago, was elected a member in 1893; died July 31, 1897, at the age of fifty-six years.

DIEDERICH, PETER, of Kansas City, Mo., was elected a member in 1890. His death is announced, but I do not know the date.

EDSON, SUSAN ANN, of Washington, D. C., was elected a member in 1872, attaining fellowship among the Seniors last year, the date of whose death I have not ascertained.

FERSON, JOHN L., of Pittsburg, Pa., was elected a member in 1891, died July 6, 1896. Further data have not been received.

FLAGG, ROBERT NEWTON, of Yonkers, N. Y., the son of our late associate, Dr. Levi W. Flagg, was elected a member in 1895; died October 1, 1897, aged thirty-eight years.

HINDS, WILLIAM HENRY WEED, of Milford, N. H., was elected a member in 1867, becoming a Senior in 1892. He died July 29, 1897, at the age of sixty-four years.

JANNEY, EDGAR, of Washington, D. C., was elected a member in 1891; died January 3, 1898, aged forty-five years.

JAYNE, DEWITT CLINTON, of Florida, N. Y., was elected a member in 1867, becoming a Senior in 1892. He died November 9, 1897, eighty years of age.

KEENEY, JOHN HARVEY, of Oswego, N. Y., was elected a member in 1888; died March 26, 1898, in the thirty-ninth year of his age.

LAZEAR, LYTTLETON LYON, of Denver, Col., was elected a member last year; died February 6, 1898, at the age of thirty years.

LOUGEE, WILLIAM HATCH, of Lawrence, Mass., one of the oldest members of the Institute, having been elected a member in 1858, becoming a Senior in 1883. He died November 18, 1897, aged sixty-five years.

MORSE, NATHAN R., of Salem, Mass., was elected a member in 1867, becoming a Senior in 1892; died August 5, 1897, at the age of sixty-six years.

OWENS, WILLIAM, of Cincinnati, O., was elected a member in 1865, became a Senior in 1890; died at Los Angeles, Cal., December 15, 1897, at the age of seventy-four years.

SMITH, HUGH MONTGOMERY, of Brooklyn, N. Y., was elected in 1892; died August 30, 1897.

TALMAGE, JOHN FRELINGHUYSEN, of Brooklyn, N. Y., was elected a member in 1872, becoming a Senior last year. He died June 30, 1897, aged sixty-four.

TYDEMAN, WILLIAM WATSON, of Knoxville, Tenn., was elected a member in 1890; died January 22, 1898, aged seventy-four years.

WILLIS, HARRISON, of Brooklyn, N. Y., was elected a member in 1892; died December 2, 1897.

WORTHINGTON, AMOS FRANCIS, of Cincinnati, O., was elected in 1870, was in attendance at our last session, becoming a Senior in 1895. He died March 10, 1898, at the age of sixty-six years.

Seven deaths have been reported since our last meeting of ex-members:

DARLING, HENRY HUBBARD, 1874 to 1890, died May 10, 1896.

ELLIS, JOHN, 1857 to 1877, died December 3, 1896.

JACOBSON, EDWARD H., 1869 to 1877; died July 6, 1896.

NOTTINGHAM, JOHN, 1870 to 1878; died March 3, 1897.

STILLSON, EDWARD, 1873 to 1878; died May 30, 1897.

TUCKER, SAMUEL GIBBS, 1875 to 1885; died March 20, 1897, aged forty-six years.

VAN CLEEF, CHARLES EDWARD, 1884 to 1889; died August 6, 1896, aged forty-six years.

Until recently the memoirs of members were presented and read as a part of the report of the Necrologist, which generally has had a place early in the order of business. These personal sketches were afterward relegated to the Memorial Service, and, later, referred to the Publication Committee without reading. This in many instances was caused by the unavoidable incompleteness of the memoirs. Deaths occurring a short time prior to the date of meeting were reported thereat and there was no time to obtain requisite data for memoirs, which in many cases requires considerable correspondence. The character of the Necrologist's report is such as to prevent its being made in full at our meetings.

Formerly the biographical sketches were printed in the first part of the volume of TRANSACTIONS, the printing at times being delayed by their not being furnished promptly, and it has happened that sketches, sent in instalments, as they were completed have been mislaid or unavoidably omitted.

I would therefore suggest that the Notices of Deceased Members be printed in the back part of the volume of TRANSACTIONS, after the reports and discussions on scientific subjects.

I would also suggest that the "Necrological List," formerly printed yearly and omitted from the volume of 1896 and of last year, of value as a reference, be again printed yearly. At the session of 1896, in discussing methods for reducing expenses, it was suggested that the list in its tabular form be stereotyped and the additions made yearly as addenda and being put in alphabetical order once in four or five years. The expense of printing would not be great if it were done without the ruling. Respectfully submitted,

HENRY M. SMITH,
Necrologist.

On motion the report was accepted and referred to the Publication Committee.

In the absence of Dr. Cowperthwaite, Chairman of the Committee on Transportation, Dr. Garrison read the printed report of that Committee, as follows, which was accepted:

REPORT OF THE COMMITTEE ON TRANSPORTATION.

To the Officers and Members of the American Institute of Homœopathy:

Your Committee on Transportation, after much delay, succeeded in securing rates for the meeting of the Institute at Omaha as follows:

From points in the territory of the Western Passenger Association —east of Denver, Trinidad, and Deadwood, and west of Chicago, Peoria, and St. Louis, one fare for the round trip, plus $2. Tickets on sale June 21st and 22d, and from points within one hundred and sixty miles of Omaha, June 23d. These are round-trip tickets, no certificates required.

From points in Central Passenger territory—east of Chicago, Peoria, and St. Louis, and west of Buffalo, Pittsburg, and Wheeling, one fare for the round trip, plus $4. Tickets on sale June 20th and 21st. These are round-trip tickets, no certificates required.

From points in the territory of the Trunk Line Association and New England Passenger Association, which includes all territory east of Buffalo, Pittsburg, and Wheeling, a fare and one-third on the certificate plan. Tickets on sale on and after June 20th. Parties within the latter territory must secure a certificate from the agent of whom the going ticket is purchased and place the same in the hands of the undersigned on reaching Omaha. Failing to do this will prevent securing a return ticket at one-third fare.

The return time limit for leaving Omaha is July 7th, which will not, under any circumstances, be extended.

Those not residing within the territory above described, and those for whom the going and return limits above mentioned are not satisfactory, can take advantage of the "Summer Tourist Rate" for the Omaha Exposition. The maximum summer tourist rate from all parts of the country is eighty per cent. of the regular rate, while from points west of Chicago it is much less.

A. C. COWPERTHWAITE,
Chairman.

Dr. J. H. McClelland made the following Preliminary Report of the Hahnemann Monument Committee, which was accepted:

PRELIMINARY REPORT OF THE HAHNEMANN MONUMENT COMMITTEE.

Your Committee has the honor and pleasure to report the completion of the task imposed upon it by the American Institute, namely, the practical completion of the memorial to Samuel Hahnemann. The granite work has been finished by the contractors, the "Maine and New Hampshire Granite Company," while the "Gorham Manufacturing Company" have completed bronzes consisting of the statue of Hahnemann and entablatures illustrative of his life. These all await the Committee's order when it is prepared to meet its obligations. It remains for the homœopathic profession and people of the United States to realize the great opportunity presented of honoring the leader of a great reformation and founder of a school of medicine, their own school, by placing this matchless work of art as a memorial to Samuel Hahnemann.

It will be gratifying to the homœopathic profession to know the opinions of eminent artists and art critics upon the merits of this work of our sculptor Niehaus. The following was received by the secretary from the distinguished president of the National Sculptors' Society:

"The National Sculpture Society examined and reported favor-

ably upon the artistic merits of the bronze statue of Hahnemann and the reliefs, last Tuesday. Personally, I congratulate your Committee upon having secured a work of exceptional merit—all of the sculptors, so far as I have heard, are enthusiastic about it. You should be gratified at the result of your work as a Committee. I sincerely hope that the authorities in Washington will give you a site worthy of the monument. Yours truly,

"J. Q. A. WARD."

The President of the Society of American Artists, in congratulating the Committee on the completion of its work, added: "You certainly have the work of art of the period."

I feel certain that the appeal made by the Committee will not go unheeded, and that this grand memorial will speedily be placed at the National Capital, where all men may view this evidence of the greatness of Hahnemann as the leader of the medical reformation of this remarkable century and founder of a great school of medicine. The Treasurer will present the financial statement of the Committee.

Respectfully submitted,

J. H. MCCLELLAND,
Chairman.

The hour having arrived for the closing of nominations for officers and Censors of the American Institute of Homœopathy, the General Secretary was directed to read the names proposed: For *President:* B. F. Bailey, Nebraska, C. E. Walton, Ohio. For *First Vice-President:* A. B. Norton, New York. For *Second Vice-President:* Sarah J. Millsop, Kentucky. For *General Secretary:* E. H. Porter, New York. For *Recording Secretary:* Frank Kraft, Ohio, and Wilson A. Smith, Illinois. For *Treasurer:* E. M. Kellogg, New York. For *Assistant Treasurer:* T. Franklin Smith, New York.

The Institute then adjourned.

THIRD DAY—AFTERNOON SESSION.

The following telegram was received:

"Greeting. District Court just knocked out examination board law located in Minnesota, and this will help hold the ground gained.

"CHESTER G. HIGBEE."

Dr. Fisher moved that the telegram be received, and the General Secretary directed to send a telegram in reply to Dr. Higbee, thanking

him for his message and expressing our sympathy with him in his affliction. Seconded and so ordered.

Dr. Fisher further moved that a message of sympathy be sent to Dr. R. B. Rush, at Salem, O. Seconded and ordered done.

On motion of Drs. Dudley and Fisher, it was ordered that we acknowledge receipt of the invitation of the German Village Company at the Exposition, and thank them for their kindness and interest.

Dr. Dudley, on behalf of the Materia Medica Conference, presented the following report:

The Committee on Materia Medica Conference would respectfully report that the Conference held one session and had an interesting discussion on "The Underlying Principles of Symptomatology Revision."

The Conference voted, and the Committee therefore recommends, that the Committee on Materia Medica Conference be discontinued and its work transferred to the Materia Medica Section of the Institute, with instruction to devote one session annually to the discussion of questions relating to "The Construction of a Scientific Materia Medica."

PEMBERTON DUDLEY,
Acting Chairman.

W. A. DEWEY,
Secretary.

The report as a whole and the recommendation separately were then put to vote and carried.

The Board of Censors then made a report of a number of names for membership.

Dr. Fisher, Chairman of the special Committee to which was referred the names of the three foreign candidates for corresponding membership, reports as follows:

The names of Dr. E. Mersch, editor of the *Journal Belge d'Homœopathie*, Brussels, Belgium, Dr. O. Nyssens, also of Brussels, and Dr. Gangardin, of Lucknow, India, having been referred to this special Committee, we beg to report that we have investigated and are glad to state that two of these proposed gentlemen are eminently well qualified for their profession, and are of the highest possible standing at home and worthy of consideration at the hands of the Institute. The Committee, however, thinks that since one of these two gentlemen is still quite a young man, with his professional life ahead of him, it would be just as well at this time not to elect him to corresponding membership, but to defer the honor for his later years. We recommend, however, that Dr. E. Mersch, of Brussels, the editor of the

Journal Belge d'Homœopathie, be elected to Corresponding Membership in the American Institute of Homœopathy.

Accepted and referred.

On motion of Dr. Dewey, Dr. E. Mersch was then duly elected a corresponding member.

The Committee on Medical Education presented for its report the report of its Chairman, Dr. Korndoerfer, as follows:

Mr. President:

Your Committee desires to submit that the subject assigned for their consideration is receiving earnest thought and comparative study from the faculties of many of our colleges, as well as from the members of all progressive medical societies.

At home and abroad the effort is being made to reach a more nearly perfect, or at least a more practical, method of instruction; while this may be observed in every department of education, it is especially noticeable in the field of medicine.

During the past few years medical colleges have been greatly strengthened in their power to improve their curriculum, both as regards variety in the subjects taught, as well as in the thoroughness and practicability with which these subjects are presented to the students. This has been accomplished largely through laws regulating the licensure of physicians. These laws, making the requirements for licensure the same for all, have compelled the poorly equipped institutions to improve their facilities for instruction, or chance being driven to the wall by their well-appointed and more competent competitors. Indirectly, though not less potently, the better colleges have been strengthened and encouraged in their efforts to raise the standard for graduation.

Did our college faculties but half appreciate this important advantage to the competent and ambitious instructors, they would earnestly advocate such properly guarded State licensure for graduates in medicine.

With regard to the manner of imparting instruction, your Committee is pleased to report that the stereotyped didactic lecture so familiar to the older members of the profession has indeed become a thing of the past. Not that didactic lectures have been abandoned, but that their tone and quality have been so changed by the educator as to almost have lost their identity.

The advanced teacher of to-day recognizes his duty to eliminate all that is unconfirmed, and much of that which is purely theoretical, from his lectures, relegating all such matter to the field of speculative and experimental medicine. He also recognizes the fact that the time devoted to the full college course, despite recent increase, is still quite inadequate for a comprehensive presentation of the known and proved facts in medicine.

The student, meanwhile, has learned to expect from his teacher

such a winnowing of thought, such a sifting of the theoretical, such an analysis of the experimental, such a demonstration of the practical, and such a condensation of the demonstrable, as none but the trained and experienced teacher could possibly give.

Facts, stern, hard facts, are demanded; reasons, causal and resultant are desired; and woe to him who, in his ambition for originality, gives place in his lectures to the unproved and unprovable. His days of usefulness as well as popularity are truly numbered.

Scarcely more than a century has passed since Withering wrote, in the preface to his "Botany": "Many people will be surprised to find so little said upon the medicinal virtues of plants; but those who are best enabled to judge of this matter will perhaps think that the greater part of that little might have been omitted. The superstition of former ages, operating upon the ignorance of mankind, gave rise to miracles of every denomination; and the fashion of combining a great variety of ingredients with a design to answer any particular purpose rendered the real efficacy of any of them extremely doubtful. The dreadful apprehensions that men formerly entertained of poisons made them fearful of employing substances that were capable of doing mischief, and therefore they rejected those that were most likely to do good. . . . Little advantage can be reaped from the experience of former times; we shall sooner attain the end proposed if we take up the subject as altogether new."

Such was the ignorance based upon superstition scarce more than a century ago. Think of the contrast to-day. Knowledge of confirmed and related facts has increased a thousand-fold. We in our school have in the department of materia medica alone garnered thousands of useful and confirmed facts; meanwhile, the old school, impelled by the results of the more scientific and progressive method of Hahnemann, has instituted the elaborate and accurate experiments known as the physiological proving of drugs. The records of these experiments must eventually serve as fitting companion studies to the provings by Hahnemann and his disciples.

Physiology, pathology, chemistry, especially organic chemistry, as well as surgery, have had, as it were, each a new birth within the time of the present generation.

Facts everywhere have supplanted theory, and the entire thinking and reasoning medical world is unanimous in its demand for a continuance of the work upon this justly approved line.

True, facts would prove of comparatively little value were it not possible to utilize them in those reasoning processes whereby we are enabled to ascend from the known to the knowable yet still unknown. Human reason has oft been enabled thus to remove the seal of the ages from many of the mysteries of nature, adding bright jewels of knowledge to our treasure store. However, in this field of thought none save the trained thinker, the skilled experimenter, the profound philosopher, can labor to advantage; it affords no promise to the untrained mind, therefore the ordinary college course should not be devoted thereto.

As well might we attempt to instruct the beginner in mathematics through the employment of problems of which the master knows no solution, as to attempt to teach the novice in medicine by aid of the unsettled theoretic problems pertaining to practice.

The student must first acquire a working knowledge of the known —a knowledge that will help him to an understanding of the philosophic connection between known causes and their confirmed effects, ere he can acquire that degree of perception or that power of judgment so necessary to the determination of correct personal conclusions, or to the institution of personal independent research.

We next would call attention to the important fact that, though many of our colleges have wrought assiduously in developing the standard of the lecturer, but little care has been bestowed upon that other important factor in college progress, namely, the mental qualification of their prospective students. In fact, until quite recently, students have been accepted in medical colleges without even the semblance of an entrance examination. They might come from the farm, the forge, or the shop; they might lack even the very rudiments of an education, yet naught stood between their ambition and the doctorate save a few hundred dollars and a parrot-like memory. To this day many, if not most, colleges fail to require of applicants an entrance examination; and many otherwise thoughtful and faithful teachers practically ignore the necessity for any special preliminary or preparatory training for the student in medicine. Again, in some institutions where such an examination is called for, as per catalogue, it is conducted in a manner far more ridiculous than a farce. In one case, to which our attention has recently been called, an applicant for matriculation who failed to possess any certified evidence of education, was asked a few commonplace questions, and then directed to go to his home, write a short autobiographical sketch—about two hundred words—and present the same next day to the proper college official. If satisfactory in style, this was to be accepted in lieu of other educational credentials.

Is this fair, is it even honest, toward either the student or a trusting public? Can such an institution stand blameless before the community?

While it may be true that in their lecture course they gave all that should be required of them as teachers, did they perform their duty at the entrance door of the college?

The student, we must assume, is unable to judge of his need, for presumably he is practically ignorant of the work before him; this is his failing. With the college, however, the case stands upon a very different basis. The faculty accepts the student with a full knowledge of his incapacity; therein lies the real fault, therein rests the condemnation. Your Committee would earnestly urge action looking toward the correction of this grievous wrong.

We would reiterate the thought that no subject pertaining to educational development in medicine is of more vital import than is that which relates to the preliminary and preparatory training of the

student. That the student of to-day is most seriously handicapped in his efforts to acquire a medical education, if he be lacking in any of the elements of a fairly liberal general education, cannot be successfully controverted. That no ambitious student need enter upon his medical studies thus hampered is equally true. The time has passed forever when he dare rest content with the knowledge of the traditional "three R's." We must remember that the opportunities for acquiring a liberal education have increased many fold during the past few decades, are practically free, and consequently within the reach of all. Therefore, it is the bounden duty of those who may desire to assume the serious responsibilities of the physician's life to improve every such opportunity for mental development. Failure in this is but little removed in quality from crime.

But it is asked, What does the medical student now need? To this we will briefly reply:

He should be carefully trained in the use of his mother tongue, and possess a vocabulary sufficient to intelligently express thought.

He should have acquired a practical knowledge of Latin, Greek, or, what many conceive to be equally desirable, of one of the continental languages of Europe, especially German or French.

He should possess a sufficient knowledge of mathematics, that he may accurately and promptly solve all relevant questions affecting measurements, proportions, or quantities.

He should possess a general knowledge of history and physiography, that he may profitably utilize the valuable recorded facts pertaining to climatology; that he may recognize the localized etiological factors of disease in general; and further, that he may intelligently recognize the causes, course of travel, and concomitant conditions related to or affecting the progress and spread of contagious disease.

He should possess a general knowledge of physics, biology, and general chemistry.

He should be trained to reason logically, and prove himself capable of reaching legitimate judgments.

To all this should be added that refinement of mind which is the natural accompaniment of the cultivated gentleman.

With such preliminary qualifications he will be able profitably to enter upon the special work of a preparatory course to the study of medicine, embracing a special knowledge of physics, organic chemistry, and physiology.

Thus fitted, he will become an ideal student, one well qualified for the thorough and profitable study of the varied problems presented in both the didactic and clinical courses of any well-regulated medical college.

Your Committee would further suggest that the members of the profession dare not hold themselves guiltless if they place the responsibility for the selection of fitting students entirely upon the faculties of our colleges. Each individual member should feel that the responsibility is personal, and that the duty of guarding the pro-

fession against the admission of incompetent students to our colleges cannot be delegated to another. Then only can we hope for a universal demand for that high standard of excellence in the personnel of our medical classes that should be the ambition of the entire profession. Let it ever be remembered that, though the onus rests upon the profession, the fault truly belongs to the individual.

Before closing this report, your Committee would note with pleasure the increasing interest in the clinical work of our colleges. The importance of this department leads us to suggest that clinical instruction be made to extend throughout the entire four years' course.

Undoubtedly, clinical teaching should be the constant handmaid to didactic instruction. The eye must learn to see, the ear to hear, the hand to appreciate by the touch, and the mind be trained to judge of the actual existence of that which in the didactic lecture is presented in word-picture only.

Disease must be seen by, and at the same time intelligently differentiated for, the student, in order that he may acquire a real understanding of all that that term implies.

AUG. KORNDOERFER,
Chairman.

On motion, this was referred to the Intercollegiate Committee.

The Committee on Resolutions made report on the resolutions introduced by Dr. Fisher on the second day of the session, and having reference to the army and navy appointments, as follows:

Mr. President and Members of the American Institute of Homœopathy:

Your Committee on Resolutions have the honor to report on the accompanying resolutions:

1st. That they be referred back to your honorable body.

2d. That the subject-matter contained in the preamble and first resolution be referred to the Legislative Committee.

3d. That the second resolution, providing for the appointment of a special committee, be referred to your honorable body without recommendation. Respectfully submitted,

W. B. DELAMATER,
Chairman.

Report was accepted.

Dr. A. B. Norton moved that the first resolution be laid on the table, because the Interstate Committee have this same matter under consideration.

Dr. McClelland seconded this for the reason that the recommendation spoken of in the resolutions was already made and enforced during

the War of the Rebellion, and that really nothing has been gained or added since that time.

Laid on the table.

The remaining section of the Committee's report was also laid on the table.

Dr. Smith, after having read his report on Organization, Registration, and Statistics, and the same having been accepted, asked for authority to publish other statistical reports and such other reports of other societies as might yet come in answer to his requests before the time of the publishing of the TRANSACTIONS. This authority was properly voted to Dr. Smith.

The Institute then adjourned.

FOURTH DAY—MEMORIAL SERVICES.

The memorial service in honor of deceased members was held in the First Congregational Church, corner of Nineteenth and Davenport Streets, at 8 P.M., on Sunday, June 26th. The speakers of the evening occupied chairs on the platform with the pastor, Rev. F. A. Warfield.

(For list of deceased members see page 148.)

Programme of Exercises.

1. Music by the Choir.
2. Introductory Remarks by President A. R. Wright, M.D.
3. Invocation by the Pastor.
4. Reading of the Scriptures.
5. Music by the Choir.
6. Memorial Address for the Seniors, by H. F. Biggar, M.D.
7. Hymn.
8. Benediction.

INTRODUCTORY REMARKS OF PRESIDENT WRIGHT.

In introducing the committee who will take charge of these memorial services, I wish to say a word on the occasion which calls us together.

We meet to-night in a different capacity from that of our annual daily exercises. We come here to give what tribute of respect we can to those of our number who have passed to the other side and have finished their earthly work. It seems quite appropriate that at this

annual convocation we should give a partial expression of the sentiment of respect and brotherly love we feel for those who have counselled and labored with us in the common cause of humanity. We welcome those in the audience from this city, who, by their presence and songs of praise, express their interest and sympathy with the services of this occasion. We sometimes find our deepest and tenderest thoughts better expressed in the language of another, and I think you will approve my choice of the following words written by Ian Maclaren on the death of his friend, William McClure, a doctor of the old school:

"Surely no funeral is like unto that of a doctor for pathos, and a peculiar sadness fell on that company as his body was carried out who for nearly half a century had been their help in sickness, and had beaten back death time after time from their door.

"And Dr. Davidson the minister prayed that we might have grace to live as this man had done from youth to old age, not for himself, but for others, and that we might be followed to our grave by somewhat of 'that love wherewith we mourn this day Thy servant departed.' Again the same sigh, and the minister said 'Amen.'"

Remarks by H. F. Biggar, M.D.

"Even for the dead I would not bind
My soul to grief—death cannot long divide,
For is it not as if the rose had climbed
My garden wall and blossomed on the other side?"

This is not a season for sorrow, but for praise and rejoicing. Death is not the King of Terrors. "We have learned even by the lifeless form of our dead to smile through our tears; instead of the gloomy crapé we wreathe the door-bell with sweet flowers, whose pure faces are expressions of hope and love."

Death and decay are essential; they are blessings; they are the evolutions in nature. Do we not see it every season in the leaf, the bud, the blossom, and the fruit? And when the parent tree has served its three-score years and ten of usefulness, decay and death follow, might we not better say change, for no particle or molecule is ever lost? Sleep is tired nature's rest, and when life's race is well run, when life's crown is well won, this dreamless sleep should always be a joyous welcome,

"For who would live alway,
Who would ask to stay,
Where storm after storm rolls high o'er the way?"

"Sleep is our sweetest earthly comfort. Is there a more delicious sensation than comes from the falling of 'tired eyelids upon tired eyes'?"

"What would we give to our beloved?
The hero's heart to be unmoved?
The poet's star-tuned harp to sweep?
The patriot's voice to teach and rouse?
The monarch's crown to light the brows?
He giveth his beloved sleep."

Futurity is not to-night for us to consider or even speculate. "We do not seek to cast our line into the fathomless, nor to measure the measureless, for we know that he who asks doth err—and he who answers errs."

"It cannot be that earth is man's only abiding place; it cannot be that our life is only a bubble cast up by the ocean of eternity to float a moment on its waves and sink into nothingness; else why these high and glorious aspirations which leap like angels from the temple of our hearts, forever wandering unsatisfied? Why is it that the rainbow and clouds come over us with a beauty that is not of earth, and then pass off to leave us to muse on their loveliness? Why is it that stars which hold their festival around the midnight throne are set above the grasp of our limited faculties, forever mocking us with their unapproachable glory? And, finally, why is it that the bright forms of human beauty are presented to our view and taken from us, leaving the thousand streams of our affections to flow back in Alpine torrents upon our hearts? We were born for a higher destiny than earth; there is a realm where the rainbows never fade, where the stars will be spread out before us like islands that slumber on the ocean, and where the beautiful beings that pass before us will stay forever in our presence."

Some there may be who think that doctors are a sect of infidels or even agnostics; if infidels, I have yet to know them, and I do not think agnostics, for is it not true that one is only such when in health and when there is no need of a physician nor the clergy?

It may be true that there are some whose religion is not very pronounced, or apparently lax. The religion of my father, whose exemplary life led to glory, the religion of my devoted, pious, praying mother is my religion; it is for me all-sufficient.

To-night we wish to pay tribute to the worth and memory of those of our fellow-seniors who have gone before, since the last gathering of this Institute. "We miss the familiar forms and faces of those who we have been accustomed to meet and greet." Their associations were profitable, for we felt enriched by their words of sound, practical thought; they were pleasant, for they strengthened the bonds which bind us together in common fraternity. However, we must confess that there is a tinge, if not a large measure, of sadness on this occasion, for life would be very pleasant but for its pleasures.

Many happy and joyous memories of their past lives sweetly linger about the names of our late fellow-members who have been called from this earthly bliss. It needs no tongue to utter their praises, nor swift pen to write their eulogies; they need no monument to record their many glorious deeds of usefulness, for they live in the hearts they have left behind. They were men for whom one is better for the knowing. Like the pious, devoted, and sainted Charles Lowder, of whom it is said that one was always the better for seeing his face. So it was with those whom I personally knew of these departed seniors. These men fill graves, but there are graves between the sky and earth, above ground, which cannot be filled.

They were great, for the great are those who serve; and they were great, for it is indeed great to be great when old. They were not hoarders of money, but riches to them was in good deeds. They preferred to have their reward in the gratitude of their patients. Their lives were symmetrical—equal in length, equal in breadth, and equal in height. To them,

> All places are palaces, and
> All seasons summer.

> Care or guilt had not deformed them, God be praised.
> Tasks and trials but informed them, God be praised.
> No one had been a base self-seeker, God be praised.
> With the mildest, they were meeker,
> They have made no brother weaker, God be praised.

Those of this noble band were true types of representative physicians. They were veterans in their work; they went into the study of Homœopathy with zeal; they loved their profession and their brethren, persons of integrity and uprightness, and of inestimable worth.

Fitted physically and constitutionally for their great work, not given to excesses, their physical system could endure the heavy work of the pioneers. Schooled early to deprivations, disappointments, denials, and adversities, all of which stimulate the perseverance of strong and healthy natures, rouse their energies, and develop their characters. They were respected even by their strongest opponents, always unyielding in what they thought was true and right, and their stern adherence to right won respect from many.

They were brave, earnest, vigilant, and conscientious workers in their profession, faithful in their chosen calling; they were ever zealous. They were among the early pioneers who braved the ridicule of the arch scoffers, for their convictions were in accordance with truth and their belief. They were heroes; they fought the battle nobly and with victory. When attacked, they defied their assailants, and cried to their adversaries:

> "Come one, come all, this rock shall fly
> From its firm base as soon as I."

These were the persons who lived the doctrines which they preached, and some were the most able expositors of the homœopathic law; some had more than a national reputation; they were known wherever Homœopathy is known. They were unremitting and arduous in their labors; remarkable in their abilities and professional genius, they fitted into the exigencies of the times; they were sincere in their belief.

> "As down in the sunless retreats of the ocean
> Sweet flowers are springing no mortal can see,
> So, down in their souls, the still prayer of devotion
> Unheard by the world rises silent to Thee.
> My God, silent to Thee,
> True, warm, silent to Thee.

"As, true to the star of its worship, though clouded,
The compass points steadily o'er the dim sea,
So, dark as they rove through this wintry world shrouded,
The hope of their spirit turns trembling to Thee.
My God, trembling to Thee.
True, fond, trembling to Thee."

They were earnest and vigilant workers of unusual culture and reading. Mind and heart were blended to an unusual degree in the make-up of these heroes. Endowed with intellects that fitted them as few men are fitted. Their minds were above the narrow strifes of men, and incapable of a thought that was petty or ignoble; they lived for those who loved them, and, in so living, they gave their own personality of charm that caused them to be loved of men as few men are loved. Though they had not all attained the lengthened span of life, yet they had more than attained those years by their deeds of usefulness. They believed that man is most happy whose soul is attuned in harmony with all that is noble and pure and good in life, and longed for the time when in every fellow-practitioner they should find a brother, a counsellor, a scholar, and a gentleman.

They were heroes, for they did the right thing at the right time, and they well knew that the life of their heart gives light to their head. They had not only talent, but purpose; not only the power to achieve, but the will to labor.

They were born for higher things than to be the slaves of their bodies. They had a mission to perform, and they did it well—true types of physicians doing all the good they could. They were consecrated to their work. They had faith in the law of cure, and gave daily evidence of their confidence in that law.

They believed, with Bonny, that "Homœopathy is the spiritualization of thought in the medical profession, and of all the professions of medicine it stands first and foremost, most conspicuous, most useful."

They sincerely believed that Homœopathy "confides every man to do his duty," and "they simply tried to do their duty every day, hoping that when to-morrow came they would be equal to it."

Duty is the grandest word in the world; it is the cement which binds the whole physical, moral, and intellectual edifice together. It is greater than charity; it is greater than love. Before it all material conquests appear of little worth, and the lustre of all military glory grows dim.

The high calling of the physician is one of the noblest and grandest professions. None can surpass it; none can equal it. It affords opportunities to exercise all of the ennobling qualities of that which is true and beautiful and good. What are the other professions or vocations in comparison with the inestimable value and importance of the very lives of these fellow-men who everywhere move and breathe and speak and act around us? What are any, or what are all these objects when contrasted with the most precious and valued gift of God—human life? And what would not the greatest and most successful followers of such

varied callings give out of their own professional stores for the restoration of health and for the prolongation of life, if the first were once lost to them or if the other were merely menaced by the dreaded and blighting finger of disease?

It is a noble profession; it makes good men better. Are we not proud to be members of the same profession as the gentle and kind-hearted author of "Rab and His Friends," or the hero of a "Doctor of the Old School," who was always and at all times willing and ready to respond to the calls of the suffering, as was "Weelum Maclure," so self-forgetting and so utterly Christian, or of that philanthropic hero who is so beautifully portrayed by Balzac in "The Country Doctor"?

They were benefactors. If he is a benefactor who plants a tree, which gives such beauty and shade and protection, how much more is he, who, by his learning and skill and experience, is not only a benefactor, but even a saviour to those whom he restores to health?

What triumph over disease and death! what joys to many homes! More worthy than many who wear the bravery medals or whose breasts are decorated with the insignia of the Legion of Honor, or whose brow is encircled with the laurel wreath.

At the death of the maker of a thousand bells, at a certain hour these thousand bells were rung, not only commemorating his death, but in joyful response to the sweet vibration of the musical sounds of perfect bells. How many thousand living tongues are constantly singing the praises of these good doctors who have brought such joy to many homes by their watchfulness and skill?

Pliny says: "Nature has given to man nothing of more value than shortness of life." He should have said: "Nature has given to man nothing of more value than a life of usefulness; then the longest life would be too short."

A young girl at school wrote to her father: "I always thought that wealth was the only thing necessary to make one happy, but when I know so many of your friends who have such great wealth, who are not very happy, I doubt if riches are the only requirement to make one happy. Then I thought it must be education; but when I know so many of your friends who are profound scholars and yet not happy, I conclude that knowledge is not the all-essential to happiness. Is it not, dear father, to be useful which constitutes the greatest happiness?" The great problem of life had been early learned by this dear child. With riches and wisdom, usefulness may be more extended, but riches are not the *sine qua non.*

A man's true wealth is the good he does in this world. If not in alms, a kind and gentle word. A poor man with a single handful of flowers heaped the alms-bowl of Buddha which the rich could not fill with ten thousand bushels. It is the bubbling stream, that flows quietly, the little rivulet that runs along day and night by the farm-house, that is useful, rather than the swollen flood or the roaring cataract.

The only pleasure that never wears out is that of doing good; good actions are the invisible hinges of the doors of heaven.

Upon life's lengthened thread they strung, like beads, the precious jewelry of kind and gentle deeds.

The Englishman said that Punshon could not help but preach well, for he was filled with the Holy Ghost; so these men could not help doing good, for they were enthusiastic workers and their ambition laudable.

They had offered up their lives, and were willing to bestow their talents in aiding and comforting the suffering. Greater love hath no man than this, that a man lay down his life for his friends.

"Did you ever think what it is that promotes the most and deepest thought in the human race? Not learning, not the conduct of business; it is not even the impulse of the affections. It is suffering. The angel who went down to trouble the waters and to make them healing was not, perhaps, intrusted with as great a mission as the angel who benevolently inflicted upon the suffering the disease from which they suffer."

Weary and worn, they are now at rest in sleep. Homœopathy has lost faithful and able representatives, whom the Great Reaper has garnered—shocks of grain full of ripe, golden ears. Come, ye blessed of my Father: I was sick and ye visited me.

"The objects and powers of our art are alike great and elevated;" our aim is as far as possible to alleviate human suffering and lengthen out human existence. Our ambition is to gladden as well as to prolong the course of human life by warding off disease as the greatest of mortal evils, and restoring health, and even at times reason itself, as the greatest of mortal blessings. If we follow these, the noble objects of our profession, in a proper spirit of love and kindness to our race, the pure light of benevolence will shed around the path of our toils and labors the brightness and beauty that will ever cheer us onward and keep our steps from being weary in well-doing.

If it be possible, as much as lieth in us, live peaceably with all men; never allow the darker part of our nature to persuade us to the attempt of overtaking him who has distanced us in the race of life by any unjust efforts to lame the character and thus diminish the speed of our adversary. May a retrospect of our lives be a retrospect of love and usefulness and honor and glory.

"Mourn the living, not the dead," said a good old soul with a heart full of love and charity, who always is striving to make others happy; "sending flowers to your friend who is gone, I send some while living."

There was so much truth in her sentiment. Are there not some who might well exclaim:

"Oh, friends, I pray to-night,
Keep not your kisses for my dead cold brow,
The way is lonely, let me feel them now.
Think gently of me, I am travel worn,
My falt'ring feet are pierced with many a thorn.
Forgive, oh hearts estranged, forgive I plead,
When dreamless rest is mine, I shall not need
The tenderness for which I long to-night."

Garlands of flowers for the noble dead, glory to those stanch pioneers whose devotions are seeds shaken from the tree of life. From a great multitude arises a loud shout, and the word of their hearts is amen to the cause of relieving the sufferings of humanity."

"When are summer roses sweetest?
When the sweet is shed.
When are summer skies the fairest?
When their light is fled.
Strange it is we never prize
Blooming rose nor bonny skies
'Till the rose's sweet is shed,
'Till the summer's light is fled.

"When are present hours the brightest?
When their hopes are sped.
When are friendly faces dearest?
When those friends are dead.
Sad it is we never prize
Happy hours nor loving eyes,
'Till the happy hours are sped,
'Till the loving eyes are dead."

FIFTH DAY—MORNING SESSION.

Monday, June 27, 1898.

Upon assembling, the President stated that he had, on a preceding day, received a message of greeting from the Eclectic Medical Association, which has been in session in this city, but that the greeting had escaped his attention until this morning. He hoped some action would be taken by the Institute, acknowledging this courtesy in a fitting manner, explaining to that body the occasion of the delay.

Dr. Dudley moved that the greeting be referred to the Committee on Resolutions, with instructions to draw up a proper response. So ordered.

Dr. Norton begged leave to report finally, for the Interstate Committee, for this session, as follows:

The Interstate Committee recommend:

1st. That the subject of appointment of homœopathic physicians and surgeons to the army, navy, and marine hospital service be referred to the Legislative Committee, with power to formulate a bill and secure its enactment by Congress at an early date.

2d. The Committee recommends that the homœopathic members of the various State Medical Examining Boards be requested to secure action in their respective States, recognizing licenses issued by other State boards, and that the members of the Interstate Committee be instructed to co-operate with them.

3d. That in States and Territories having no medical examining boards, the members of the Interstate Committee representing those States, are hereby instructed to co-operate with the legislative committee of their State societies to secure the passage of a bill establishing a State licensing board, which shall issue licenses to all applicants who possess a diploma from a regularly incorporated and legally chartered medical college, or a license from a State medical examining board.

The report was, on motion, accepted, and it was ordered that the sections be taken up seriatim. This was done, and the three resolutions adopted as printed above. Finally the report as a whole was adopted.

The Committee on Medical Legislation then presented the following report through Dr. Custis:

Appointments to the Medical Corps of the Army, Navy, and Marine Hospital Service, etc.

Mr. Vest, from the Committee on Public Health and National Quarantine, submitted the following report:

The Committee on Public Health and National Quarantine, to which was referred Senate joint resolution 164, submit the following report:

The resolution referred to the committee is as follows:

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That graduates in good standing of any medical college regularly chartered under the laws of any State of the United States, and eligible to practise therein under the laws of such State, shall, on application, be entitled to examination for appointment in the medical corps of the Army, Navy, and Marine Hospital Service of the United States, any statute or departmental rule or regulation to the contrary notwithstanding.

Amendment.

Joint Resolution.—Preventing discrimination against graduates of legally chartered medical colleges in appointments to the medical corps in the Army, Navy, and Marine Hospital Service of the United States.

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That graduates in good standing of any medical college regularly chartered under the laws of any State of the United States, and eligible to practise therein under the laws of such State, shall, on application, be entitled to examination for appointment in the medical corps of the Army, Navy, or Marine Hospital Service of the

United States; said examination shall be in writing, and complete records of such examinations shall be preserved and be open for inspection by the representatives of any such medical college or candidate for appointment, but no applicant shall be required to pass an examination in any system of therapeutics than the one taught in the legally chartered college from which such applicant graduated, and appointments shall be made in the order of the highest average attained by the applicant without favor, any statute or departmental rule or regulation to the contrary notwithstanding.

Believing it proper to call the attention of the Surgeon-General of the Army, the Surgeon-General of the Navy, and the Supervising Surgeon-General of the Marine Hospital Service to the provisions of the resolution, communications were sent by the committee to each of these officers asking their views as to the necessity for such legislation, and also inquiring what had been the practice of the bureaus over which they presided in regard to the matters named in the resolution.

The replies of these officials are herewith annexed, and by them it will be seen that emphatic denial is made of any discrimination against the graduates of any reputable medical institution who may be applicants for positions in the medical corps of the Army, Navy, and Marine Hospital Service. It is evident from these replies that the officers named fully recognize the impropriety of such discrimination, and admitting the truth of their statements, it seems to the committee that no harm can result from adopting the resolution with certain amendments hereafter named.

The principles of justice and equality which constitute the basis of our institutions would have only just recognition in placing upon the statute books the denunciation of any monopoly in public patronage for the benefit of the graduates of certain medical schools to the exclusion of other physicians whose high character and professional ability cannot be doubted.

The committee suggest that the resolution be amended as follows:

In lines 4 and 5, after the word "State," strike out the words "of the United States," and insert "Territory or the District of Columbia."

In line 6, after the word "State," insert "Territory or the District of Columbia."

Thus amended, the committee recommend that the resolution be adopted.

WAR DEPARTMENT, SURGEON-GENERAL'S OFFICE.
WASHINGTON, May 21, 189[illegible].

SIR: Referring to Senate resolution 164, inclosed herewith, I have the honor to inform you that in my opinion the legislation contemplated is unnecessary, as our practice at present is entirely in accordance with the requirements of the joint resolution.

Very respectfully,

GEO. M. STERNBERG,
Surgeon-General United States Army.

Hon. G. G. VEST,
United States Senator, Washington, D. C.

DEPARTMENT OF THE NAVY,
WASHINGTON, D. C., May 21, 1898.

SIR: Referring to your letter of this date, I have the honor to state that no discrimination is made against graduates of any legally chartered medical college in the matter of appointment to the Medical Corps of the Navy. I would state, furthermore, that a certificate of graduation from any medical college is not required.

Very respectfully,

W. K. VAN REYPEN,
Surgeon-General United States Navy.

Hon. G. G. VEST,
Chairman Committee on Public Health and National Quarantine,
United States Senate, Washington, D. C.

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL MARINE HOSPITAL SERVICE.
WASHINGTON, D. C., May 21, 1898.

Hon. GEORGE G. VEST,
Chairman Committee on Public Health and National Quarantine,
United States Senate.

SIR: I have to acknowledge receipt of your letter of the 20th instant, inclosing copy of S. R. 164, and asking a statement as to whether or not discrimination against graduates of legally chartered medical colleges is made in the matter of appointment to the medical corps of the Marine Hospital Service.

In reply I have to state that no such discrimination is made. I inclose for your information a copy of a circular containing extracts from the regulations bearing upon the qualifications necessary for appointment to the medical corps of this service.

Respectfully, yours,

WALTER WYMAN,
Supervising Surgeon-General Marine Hospital Service.

INFORMATION FOR PERSONS DESIROUS OF ENTERING THE MEDICAL CORPS OF THE UNITED STATES MARINE HOSPITAL SERVICE.

[Department Circular No. 30, 1898.]

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL MARINE HOSPITAL SERVICE,
WASHINGTON, D. C., February 11, 1898.

The following extract from the Revised Regulations of the Marine-Hospital Service is hereby published for the information of candidates for appointment into that service:

. . . . . .

18. Graduates of medicine desirous of undergoing examination for the position of assistant surgeon in the Marine Hospital Service of the United States must make an application addressed to the Supervising Surgeon-General, in their own handwriting, requesting permission to appear before the Board of Examiners. Applicants for examination should state their age, date and place of birth, present legal residence, and whether they are citizens of the United States, and name of medical school and college of which they are graduates, and furnish testimonials from at least two persons as to their professional and moral character.

. . . . . .

20. No person will be appointed an assistant surgeon whose age is less than 21 or more than 30 years, and, as a preliminary to a recommendation for appointment, the applicant must have been graduated in medicine at

some respectable medical college, and must pass a satisfactory physical, academic, and professional examination before a board of commissioned officers.

. . . . . .

WALTER WYMAN,
Supervising Surgeon-General U. S. M. H. S.

Approved:
O. L. SPAULDING, *Acting Secretary.*

Your Committee, after the consideration of much evidence, and analyzing the rules made by the War, Navy, and Treasury Departments, regrets to state that belief in the methods used by the Homœopathic School, graduation from Homœopathic medical colleges, or membership in Homœopathic medical societies renders physicians ineligible for appointment in the service of the Army, Navy, or Marine Hospital Service.

The Committee sees but little encouragement for the hope that our School will gain admission during the present war, and it asks your endorsement of the accompanying bill, or, if possible, the adoption of the amendment, and the co-operation of each member of the Institute by using his influence with the Senator representing the State where he resides, and the Representatives of his District at Washington.

It is further recommended that members of the Institute send their endorsement of the resolution to their Senators and Representatives, and that they pledge themselves to support any and every applicant for a position in the above-named departments of the Government, when such applicants have the endorsement of their local or State societies, provided that such societies are recognized by the American Institute of Homœopathy. Respectfully submitted,

J. B. GREGG CUSTIS, *Chairman,*
J. H. MCCLELLAND,
D. A. MACLACHLAN.

On motion of Dr. Norton, the report was accepted and adopted.

When the Board of Censors appeared with a new list of names to be elected to membership, the President said that he wished there were more heartiness of approval when the vote was taken in these cases. "If you have no objection," he continued, "let your voice be heard as if you were glad these new members were coming in with us."

The Board of Censors, through Dr. Peck, reported that it had a list of names to some of which objection had been made, but that the board, having heard the objection, notwithstanding recommended their election. Fourteen names were then read, by request, as on the

list of those objected to. The remainder, being without objection, were duly elected.

The President then asked for reasons why these other names, formerly objected to, should not be admitted into membership, in view of the fact that the Board of Censors had already listened to all the objections and still believed them worthy to become members.

Dr. Fisher said he had no objection to any of them, but he knew of one man who had, but he was not present. He suggested holding these names for a future session of the Institute in order that more testimony could be received and the Institute act more surely.

Dr. McClelland moved the election of the list, but accepted an amendment that the names be voted on separately.

Dr. Dudley believed this was wholly unnecessary. The Censors represented the Institute. They have already listened to whatever charges may have been alleged against some of these names, and they find them without foundation. They have not come here with any doubt; they do not ask for instructions; they are confident that the objections are groundless. He, however, suggested that the names of those against whom charges had been preferred be read again. Dr. Peck read the name of one, but was not sure of the other.

Dr. Fisher desired to know if the Legislative Committee had passed upon the standing of the colleges from which the two names hail.

Dr. Peck replied that the Intercollegiate Committee had taken no action in regard to this college, and therefore it stood on the same footing as any allopathic or eclectic college.

The President asked concerning the status of Dunham College with the Institute?

Dr. Dudley replied that Dunham College is simply not connected or associated with the Intercollegiate Committee of the Institute. No one has ever presented any charges against them; and he thought the Intercollegiate Committee will hold the same opinion as has been taken by the Board of Censors.

The question being called on Dr. McClelland's motion to elect these names separately, the chair called for the name, first, of Eugene S. Sawyer, and the same was unanimously elected. The next name was that of Dr. G. P. Warren, and he, too, was unanimously elected. The remaining twelve names were then again read, and, upon call for action, were unanimously elected.

The Committee on the President's Address announcing itself ready, Dr. Gatchell was called to the Chair.

Dr. Dudley presented the following report:

To the American Institute of Homœopathy:

Your Committee on the President's Address begs leave respectfully to report, in reference to the recommendations, as follows:

First, we recommend the adoption of the following as a standing resolution:

Resolved, That the Committee on Legislation shall, as opportunity may offer, encourage and promote legislation requiring that medical expert witnesses shall be appointed by the courts or other competent State authority outside of the medical profession and paid by the county or State; provided that in the choice of such witnesses the law and the appointing power shall not discriminate in favor of any particular school of medical practitioners.

Regarding the subject of uniformity of State Medical Licensure, and in view of the fact that so many members of the Institute are not in accord with our present licensure system, your Committee, after very careful consideration of the subject, recommend, as a substitute for the phraseology of our President's recommendation, the following:

Resolved, That in the opinion of the American Institute of Homœopathy, the lack of uniformity in the licensing requirements and the refusal of each State to recognize the license of all the other States, constitutes a needlessly oppressive and otherwise objectionable feature of our present medical license system.

On the subject of Forestry, your Committee recommends the adoption of the President's recommendation as follows:

Resolved, That the members of this Institute will, as opportunity may offer, assist in securing legislation for the preservation and, where needed, the reproduction, of our American forests.

Regarding the phrasing of the homœopathic formula as it relates to the choice of the words "curantur" or "curentur," we urge the adoption of the President's recommendation, and in the following form:

We recommend the appointment of a committee of our most scholarly and judicious members, consisting of three, to be appointed at this meeting, together with Drs. Dudgeon and Hughes, of England, to consider the subject and report next year.

We recommend, in reference to the schools for nurses, that the following be adopted as a standing resolution:

Resolved, That the duties of the Committee on Medical Education shall include an annual report in relation to the progress, the condition, and the needs of educational work in our medical colleges and training-schools for nurses.

In reference to the subject of our Materia Medica, the President made no formal recommendation, but asked the vital question: "How shall we effect a revival?" and answered it, "Only by increased activity in work."

Amend Section 2, Art. VII., of the By-laws, first line, to read as follows:

"The Committees on Legislation, Education, and Drug Provings shall consist of five members each."

Also, that the membership of the Committee on Drug Provings shall be reduced by allowing the vacancies occurring by expiration of terms in 1898 and 1899 to remain unfilled.

Your Committee have decided to suggest that it be made the duty of the Committee on Provings to select one drug each year and forward it to the faculties of all our colleges, to be employed during the next college session in making provings under directions issued by the Committee. All papers and a careful report to be made thereon, at the next regular meeting of the Institute.

PEMBERTON DUDLEY,
W. A. DEWEY,
DAVID A. STRICKLER.

The report was accepted, and it was ordered that the recommendations be taken up seriatim. This was done as follows:

Recommendation 1, of the President's Address, was embodied in Resolution 1 of the Committee's Report, and, upon motion, adopted.

Recommendation 2, having reference to State licensure, the Committee embody its views on this subject in its Resolution No. 2, which was adopted.

Presidential Recommendation No. 3, having reference to forestry, was considered by the Committee and embodied in their Resolution No. 3, which was adopted.

Presidential Recommendation No. 4, having reference to the proper spelling of curantur or curentur, was made the subject of Committee Resolution No. 4.

Dr. MacLachlan said it seemed to him, in view of the importance of this measure, that we ought to have someone from Germany who could look up the original records and learn concerning Hahnemann's use of the formula in Germany. We ought to substitute, he said, the name of Von Villers for one of the Englishmen; that would make one Englishman, one German, and the others would be members of the American Institute. Dr. MacLachlan put this in the form of a motion.

Dr. H. M. Smith moved, as a substitute, that the name of Von Villers be substituted for that of Dr. Richard Hughes. That we keep on the name of Dr. Richard Dudgeon, who is the father of Homœopathy to-day and the oldest Homœopathic practitioner in England.

Dr. MacLachlan accepted the substitute.

The President suggested that the name of Dr. Schweininger, Bis-

marck's physician, be also considered, but withdrew his suggestion upon learning that this doctor is not a member of the Institute.

Dr. H. C. Allen said he most heartily approved of the suggestion of Drs. MacLachlan and Smith. He believed that both Dudgeon and Hughes would control the recommendation of the term. We know just where they stand, and in all probability what they would report.

On call for the amendment, the Second Vice-President put the question, and it was ordered that the name of Dr. von Villers be substituted for that of Dr. Richard Hughes in the fourth resolution of the Committee on President's Address.

The Resolution as amended was then adopted.

Presidential recommendation No. 5, having reference to the School for Nurses, the Committee embodied its views in Resolution No. 5, which was adopted.

This recommendation carrying with it a change in the By-Laws must lie over one year for ratification.

Presidential recommendation having reference to the better teaching and understanding of Materia Medica, the Committee embodies its views in its Resolution No. 6, which was adopted.

On further motion of Dr. Dudley the Report of the Committee on President's Address as amended be now adopted as a whole.

So ordered.

An announcement was made by Dr. Dudley that the Senate of Seniors was desirous of coming into closer relationship with newly elected members, and, in order to accomplish that, it was suggested by one of the members, this morning, that newly elected members who are present, who wear their visitor's badge which they received on first coming to the Institute, will wear it over their membership badge. Then all the members of the Institute will know that they are the new members and will proceed to make their acquaintance willy-nilly.

Dr. Van Baun presented the following Resolution referring to the poor attendance upon the Institute the last two or three days of the session. It was referred to the Committee on Resolutions:

Whereas, In recent years the last two or three days' sessions of the American Institute of Homœopathy have been so poorly attended as to destroy the usefulness of the sections planned to be held on these days, to the great detriment of the scientific work of the Institute. Therefore be it

Resolved, That a committee of five be appointed to take under consideration a plan of meeting necessary to be adopted to overcome the

difficulty, and report at the next meeting of the American Institute of Homœopathy in 1899.

Resolved, That the members of the Institute be requested to submit to the committee for its guidance suggestions to this end.

Dr. H. M. Smith presented the financial report of the Hahnemann Monument Committee.

Mrs. Dr. J. T. Cook being called for, spoke to the Institute in explanation of the Ladies' Hahnemann Monument Fund which had been organized directly after the adjournment of the Institute last year in Buffalo. She told of the vastness of the work entered upon, recounted many of the obstacles met and overcome, even in the short twelve months. She felt confident, notwithstanding the greatness of the undertaking. Thirty-eight States and Territories being now interested and properly officered and directed, she felt confident of success. One of the innovations of the committee is to appeal for money, not alone to the Homœopaths, but also to the Allopaths, because they are just as much indebted to Hahnemann for the present reign of improvements in medicine as the Homœopaths.

Dr. McClelland: The American Institute of Homœopathy owes a vote of thanks to Mrs. Cook and her assistants for having taught us part of our duty. And I move that such vote of thanks be tendered.

This was done unanimously. Adjourned.

FIFTH DAY—AFTERNOON SESSION.

Dr. Kinyon said that in this morning's report by the Board of Censors two names were voted on separately and distinctly, so that his motion would refer to but one of those two, namely, Dr. E. W. Sawyer. He therefore moved that the name be reconsidered and referred to the Board of Censors.

A *vive voce* vote not being satisfactory to the President, a rising vote declared for the reconsideration—ayes 16, noes 4.

The vote on the name of Dr. E. W. Sawyer for admission into the Institute was then ordered reconsidered and referred back to the Board of Censors for further action.

Dr. Williamson of the Committee on Elections reported ready, and presented the following report:

For *President:* B. F. Bailey, 106 votes.

For *President:* C. E. Walton, 76 votes.

For *First Vice-President:* A. B. Norton, 173 votes.

For *Second Vice-President:* S. J. Millsop, 161 votes.

For *General Secretary:* E. H. Porter, 175 votes.

For *Recording Secretary:* Frank Kraft, 91 votes.

For *Recording Secretary:* Wilson A. Smith, 91 votes.

For *Treasurer:* E. M. Kellogg, 175 votes.

For *Assistant Treasurer:* T. Franklin Smith, 170 votes.

For *Censor:* Eldridge C. Price, 115 votes.

For *Censor:* T. C. Duncan, 55 votes.

For *Registrar:* H. C. Aldrich, 171 votes.

Dr. McClelland moved that the report be accepted. So ordered.

The President said that since the vote on the Recording Secretary is a tie, the manner of settling it is to take a new vote in open session. It was agreed to take a new ballot and not call the roll. A new ballot was then prepared, which resulted as follows:

For *Recording Secretary:* Dr. Frank Kraft, 49 votes.

For *Recording Secretary:* Dr. Wilson A. Smith, 48 votes.

Speeches were called for from the successful candidates, and, in the main, responded to. Dr. Wilson A. Smith moved, on behalf of his supporters, to make the election of Dr. Kraft unanimous. This was done. Dr. Duncan asked that the election of Dr. Price be also made unanimous. So ordered.

Dr. Dudley, for the Intercollegiate Committee, made the following report:

Report of the Intercollegiate Committee.

The Intercollegiate Committee would respectfully report that the college year just closed has been, in every important respect, a prosperous one. The quality and size of the classes have not diminished, standards have been maintained, and facilities have been improved. This statement will apply to the colleges as a body. The only need to particularize is in reference to the homœopathic department of the University of Michigan. This institution, which was, for so long a period, a source of profound concern to the whole homœopathic profession, has, during the past year or two, recovered from the conditions which threatened its existence, and is again among the most prosperous and successful of our homœopathic schools. No new schools have been organized during the year.

The Intercollegiate Committee asks leave also to make a special report in relation to the Report of the Standing Committee on Medical Education, referred to this Committee by the Institute two days ago.

For reasons which the Intercollegiate Committee considers wise and sufficient, we ask leave to return to the Institute the report on Medical Education, and without making any recommendation in regard to it.

Respectfully,

PEMBERTON DUDLEY,
Vice-Chairman.

The report was accepted.

REPORT OF THE COMMITTEE ON LOCATION.

Your Committee, after careful consideration of the invitations from Niagara Falls and Atlantic City, as well as the desirability of Lookout Mountain as the place of next meeting, unhesitatingly recommends that the Institute select for its meeting place in 1899, Atlantic City, N. J.

Respectfully submitted,

J. B. GREGG CUSTIS, *Chairman,*
W. H. VAN BAUN,
C. B. KINYON,
N. B. DELAMATER.

Dr. Custis, for the Committee on selecting a place for our next annual session, said that they had received invitation for and had accepted Atlantic City, and asked that the Institute adopt the report of the Committee.

On motion it was so ordered.

Dr. McClelland offered, as a Standing Resolution, that the Executive Committee of the American Institute of Homœopathy be the Committee of Arrangements, with a local auxiliary committee, in order that the officers of the Institute may control the important matters connected with the meeting. Seconded by Dr. Custis, and put to vote; declared carried.

Dr. Leonard said, in regard to the report of the Intercollegiate Committee, it was noticed that they returned one paper without comment—a paper which had been referred to them by the Committee on Medical Education. He moved that this paper of Dr. Korndoerfer's be referred to the Committee on Publication.

Dr. H. M. Smith moved to amend, but in a moment changed the form of his motion and made it to lay the report on the table, which prevailed.

After several local announcements had been made, the Institute adjourned.

SIXTH DAY—MORNING SESSION.

Tuesday, June 28, 1898.

The Section in Clinical Medicine reported its section work complete, with all papers in the hands of the Institute.

Mr. President:

The Section in Clinical Medicine reports that, in charge of its Chairman, Dr. William H. Van Baun, it has held two meetings, according to the programme of the official announcement. At the first meeting the subject of "Pneumonia" was discussed; at the second, the "Action of the Antitoxins." "Mountain Fever," the third topic, was not taken up. The method adopted of presenting the subjects for discussion by means of ten-minute essays has proved to be eminently satisfactory, and was chiefly instrumental in contributing to the interest and success of the meetings of the Section. This new method is recommended for future practice.

WM. W. VAN BAUN,
Chairman.

CHAS. GATCHELL,
Secretary.

Dr. Charles Gatchell, of Chicago, was appointed Chairman of the Section in Clinical Medicine for the following year.

The President made additional appointments to the Board of Censors as follows: Drs. McClelland, Custis, and Price.

The Committee on Resolutions reported back the resolution of Dr. Van Baun having reference to the better arrangement of the official programme, in order not to lose the value of the last two or three days of each session. Dr. Delamater presented the following report:

Mr. President and Members of the American Institute of Homœopathy:

Your Committee on Resolutions have the honor to report favorably on the resolution presented by Dr. Van Baun, and move the adoption of the preamble and resolutions.

Respectfully submitted,

N. B. DELAMATER,
Chairman.

On motion of Dr. Dudley, the report of the Committee was accepted and adopted. (This carries with it the appointment of a committee of 5.)

The amendments to the By-Laws as proposed at the Buffalo session, and now found on page 3 of the official programme, were then called up.

As published in the programme, the proposed amendment reads: To amend Article VIII., Section 7, of the By-Laws to read: "There

shall be published in each volume of the TRANSACTIONS (1) a list of the senior members, arranged according to their year of membership, and followed (2) by an alphabetical list of the other members. The code of ethics shall be published in the TRANSACTIONS once in five years." Moved and seconded that this be done.

Dr. T. F. Smith hoped this would not prevail. He did not want it to be done. It is very convenient to refer to States when members are classified in that way. The expense is not very great, and he hoped that the amendment would not be carried. He hoped that classification by States would still be kept up.

Dr. Dudley: The list of members by States is a list that each member of the Institute refers to very frequently. He may have many occasions to refer to the list of members by States. He may want to know what homœopathic physician resides in certain States or cities when he wants to send patients there. That alone makes it valuable to every member of the Institute. Occasionally the Secretary has need to communicate with the members of a certain State or region. And don't leave out the list of seniors from the general alphabetical list. If you do, you will require the secretary, whenever he is sending out documents or Institute matter, to consult two lists instead of one. As for the saving in the expense, I think that is very trifling—a very few dollars.

Dr. Walton: I would like to modify my motion so as to bring this matter before the meeting. I move the adoption of the second provision.

Dr. Dudley: I will second that in order to get a chance to vote against it.

Put to vote and declared lost. This disposes of so much of the paragraph as relates to the publishing of the list of names.

Dr. T. Franklin Smith, in relation to the proposed amendment on same page of the official circular having reference to changing the time for nominating and electing officers and selecting the next meeting-place, offered the following amendment:

To amend the second proposed amendment by having Article IX., Section 7, read as follows: "The election of officers for the ensuing year, and the determination of the next place for the meeting of the Institute shall take place at the second morning session of the Institute, at 10 A.M., Sunday excepted. The nominations shall be made at the first morning session, at 10 A.M., in the following way," etc.

Thus amended, the original amendment was put to a vote and unanimously carried.

The Committee on Drug-Proving had no report.

The Committee on Medical Legislation had no report.

The Committee on Press, through its chairman, Dr. King, of Washington, made the following report:

The Press Committee of the American Institute of Homœopathy respectfully submits the following report:

About one month previous to date of meeting, arrangements were made with the Associated Press management at Washington to take and send by mail all matter of importance which could be prepared and secured beforehand in time to send to their subscribers throughout the country by means of the mails. This they were glad of an opportunity to do.

The Chairman of the Press Committee communicated with all executive officers of the Institute, and section and committee chairmen, with a view to securing early copy of any important reports to be submitted at the Omaha session.

The sending of copy out by the Associated Press, and having it accepted by the newspapers throughout the country and printed, however, are two different things.

To the end that the matter might be accepted and printed by the newspapers to whom it was sent, the Committee wrote to about sixty members of the Institute, selecting one or more in each important city, requesting that the member use his personal influence with his home papers to look out for the Associated Press reports of our meetings, and to print them.

With the good beginning made this year, and the experience derived, it is extremely probable that much better press reports, and even wider circulation of the news of the Institute sessions, will be secured.

The Press Committee of the Local Committee of Arrangements is responsible for the main part of the work done by local papers, and, we think, are to be congratulated on the extremely full and complete reports appearing in the Omaha papers.

The Press Committee would recommend that all committee reports, sectional papers, and standing resolutions be prepared and submitted in duplicate, so that one copy could be furnished the newspapers through the Press Committee early, from which transcripts could be made, and thus the Institute obtain early and accurate newspaper reports.

WM. R. KING,
Chairman.

Report accepted and referred to Committee on Publication.

The Committee on Life Insurance Companies reported, through its chairman, Dr. D. A. Strickler, as follows:

Report of Committee on Life Insurance Companies.

Your Committee respectfully reports that, following the plan outlined a year ago, it sent the data on hand, relative to the position of the Homœopathic School in medical education, to the relative amount of insurance applied for by patrons of Homœopathy, and to the number of homœopathic examiners employed by the different companies, to men in different cities where the home officers are located, and requested that, armed with these data, they have personal interviews with the officers of the different companies.

It was somewhat difficult to find men who could give the necessary time, but the following report, from Dr. J. Perry Seward, of New York, which is given as approximate only, and is not to be taken as final nor authoritative for any of the companies, but simply as the expressions of the views by the officials interviewed, is submitted for your consideration:

"Mr. Ide, of the Home Life Insurance Company, received me and called Dr. Chapin, medical examiner for the company. Mr. Ide is not prejudiced against Homœopaths, having been treated by them. He recognizes the fact that schools of medicine have nothing to do with the ability of men for positions of medical examiners, but explains the fact that his company rarely appoints a Homœopath, thus: 'Dr. Chapin is a "regular." He is in close touch with men on whose judgment he can rely all over the country, in the medical societies of the old school. He can secure reliable testimony as to the ability and standing of the practitioners in all parts of the country. It is his duty to protect the company by the appointment of men he can vouch for. He has no such facilities as regards Homœopaths, and therefore rarely appoints them. Still, in some towns, the Homœopath is recognizedly the best man, and he there gets the appointment.' He mentioned Dr. Olin, who was appointed in Detroit on his merits, notwithstanding the number of other available physicians of the old school.

"Mr. Ide cut me short when I began to tell of the business derived from homœopathic sources. Even granting the facts, he would deny their having any bearing on the point at issue. The claim by a physician that he will bring business, or the threat that if not appointed he will work against the company, have great weight against the candidate. And Mr. Ide urged that Homœopaths be advised against any attempt to boycott the companies, affirming that such action will postpone the desired recognition, inspiring, as is natural, resentment and determined opposition. On the contrary, let Homœopaths perfect their organization, provide men who, by their attainments, will make positions for themselves as chief medical examiners, and the problem will be solved. Truth will prevail, the best men will get to the top, and better by natural means than by boycott and combat.

"President Brewer of the Washington Life stated that the present medical examiner of the company was of very liberal views as regards

the appointment of Homœopaths. For twenty-five years, as long as the president is aware, Homœopaths have been among the examiners. He named Dr. J. McE. Wetmore, of New York, as frequently called upon. Dr. Reginald Munson, of Washington, is on their list. He claimed that there is no reason to believe that there is any discrimination against Homœopaths, or will be under the present régime.

"President Hyde of the Equitable was ill and absent. He is a Homœopath. The Secretary referred me to Mr. J. W. Alexander, Vice-President. He stated that the attitude of the Equitable toward the contention of the Homœopaths is colorless. They ignore the question as they would the religion of their agents. Their chief medical examiner is an allopath, and he does as he chooses in the matter, it not being surprising that he appointed regulars when he could find them sufficiently able. The Homœopaths, he thought, would do the same thing if similarly situated. I was unable to prove to him that it is simply recognition of Homœopaths, as on scientific equality with allopaths, as regards public services, that is desired. He regarded the matter none of the business of the insurance companies. The quotation of figures showing homœopathic business suggested immediately to him the idea of a threat of boycott, and he denounced the notion with warmth. No dictation regarding the management of their private business would receive the slightest notice. He regarded the preparation and quotation of such figures the wrong way to set about getting the desired recognition.

"I failed to reach the President of the Metropolitan Life, being referred to the medical examiner, Dr. Thomas H. Willard. He gave me the following written statement:

"'The attitude of the company, in brief, is to procure the best medical service possible, and without prejudice against any class; that no record of the affiliations of the medical examiners in the company's employ had been tabulated, and consequently a statement of the homœopathic physicians on the force could not be given. A number of physicians of the Homœopathic School are employed as examiners.'

"In conversation, Dr. Willard mentioned that Dr. Edwin H. Wolcott, of Rochester, is an examiner for the company, and that he had on that day appointed a Homœopath in Saratoga County, New York. He explained the large proportion of homœopathic policies and their greater average size as compared with the number of Homœopathic practitioners by saying that the Homœopaths are still too few to need to settle in large numbers in the poor districts, and their *clientèle* was chosen among the well-to-do. He added that the young graduates of the 'regular' school are often willing to accept the work of examining for the industrial policies at 50 cents and $1 each, while few Homœopaths would apply for the positions.

[Signed] "J. PERRY SEWARD."

Besides these opinions delivered orally, the following are quotations

from letters written to Dr. B. W. James and Dr. Richard C. Allen, of Philadelphia, two members of this Committee:

Mutual Life of New York.—"In making our selections for medical examiners, we endeavor to secure the services of the very best physicians. It is our custom to give the preference to allopaths, from the fact that the medical board of the Company is composed of allopathic physicians, and has been since its foundation.

[Signed] "GRANVILLE M. WHITE, M.D.,
"*Medical Director.*"

The Penn Mutual Life Insurance Company has appointed thirty-four homœopathic medical examiners, most of them since our last meeting. This is one of the coincidences of good coming from the efforts of this Committee.

The Phœnix Mutual of Hartford.—"We have quite a large number of Homœopaths on our books as examiners, and have never discriminated against them.

[Signed] "H. W. LITTLEFIELD,
"*Manager.*"

Provident Savings Life Assurance Society, New York.—"This society does not discriminate against any particular school of medicine in the appointment of its examiners. As a matter of fact, we have members of the homœopathic school on our list at the present time.

[Signed] "A. L. VANDERWATER, M.D.,
"F. I. GRANT, M.D.,
"*Medical Directors.*"

Union Central Life, Cincinnati, O.—"This company chooses its medical examiners from physicians from throughout the country who are able to furnish State certificates of their standing in the profession. The great majority of our examiners are members of the old school, but we have on our list physicians of the homœopathic, eclectic, and other schools, just how many I am unable to say.

[Signed] "E. P. MARSHALL,
"*Secretary.*"

North Western Mutual Life (Philadelphia Office).—"We regret very much that we are not in a position to give the information asked for in your letter. If we could do so it would give us great pleasure. We know that this company does employ homœopathic physicians, but to what extent we cannot say.

[Signed] "EWING & KIRKPATRICK."

North Western Mutual Life Assurance Company, Chicago, Ill.—"We do not confine ourselves to any particular school of medicine in

our selection of medical examiners. We endeavor to select only the best men, irrespective of school.

[Signed] "C. A. CANFIELD, M.D.,
"*Assistant Medical Director.*"

New England Mutual (Philadelphia Office).—"In the field covered by our agency we have a number of examiners who practise Homœopathy, but we have no means of telling how many nor who they are.

[Signed] "MARSTON & WAKELIN,
"*General Agents.*"

National Life Insurance Company, Vermont.—"This company endeavors to secure those members of the profession who are best fitted for the position, and so evidences of fitness, integrity, and professional skill, not belief nor disbelief in any special dogmas, are regarded. Without taking the trouble to go over the list of examiners, the names of the following homœopathic physicians occur to me." (He then names eighteen, among which occur the well-known name of George Royal.)

[Signed] "A. B. BISBEE,
"*Medical Director.*"

In addition to these, your Committee submits a copy of correspondence with the New York Life, which company shows itself least courteous and most insulting to the Committee and to the School of any yet addressed.

The following correspondence with the New York Life Insurance Company, begun by Dr. Warren D. Howe, of Cañon City, Col., and afterward turned over to the Chairman of this Committee, is self-explanatory:

"JOHN A. MCCALL, *President,* New York Life Insurance Company.

"DEAR SIR: Your notification that a policy has been issued in your company is at hand and I beg your indulgence for a reply.

"My application and examination were made while I was in Chicago a few days last month, *but* were conditional upon certain information, to wit, that the New York Life Insurance Company did not discriminate in its examiners against homœopathic physicians. I wished to satisfy myself on this point before I made application, but could not do so before leaving Chicago and was anxious to give Mr. W. L. Ament, your agent and my friend, the benefit of the risk, so signed on the before-mentioned condition.

"I am just now in receipt of a letter from Dr. D. A. Strickler, Denver, Chairman of the Committee on Insurance of the American Institute of Homœopathy, in reply to my query on the subject. Dr. S. has been chairman of this committee for several years and is qualified to speak with knowledge in the matter.

"I quote his letter:

"'The New York Life Insurance Company in Brooklyn, Buffalo, Chicago, Cleveland, Kansas City, Milwaukee, Minneapolis, New York, Omaha, Pittsburg, San Francisco, St. Louis, and St. Paul has not a single Homœopathic physician. If they have elsewhere I have no knowledge of it.' As this is manifest evidence of an unjust discrimination and rank injustice, as a Homœopathic physician I cannot see how I can consistently accept the policy in spite of the fact that I want insurance, that I want to favor my friend Mr. Ament, and that I can find no further fault with your company. It is the principle of the thing, the unfair refusing to appoint men as examiners who are just as well qualified for the work simply because they are members of a different sect of medicine than the medical director of the company.

"I cannot but feel that it is an insult to my intelligence, as well as to my many friends, members of the school of medicine, and the many intelligent people who believe in Homœopathy. You will pardon my trespassing at such great length on your time with what must seem to you such a small matter. I simply wish to set myself right and square with my friend and the company, with the very small hope that some time the insurance companies which now will not appoint a Homœopath as an examiner will see the injustice in such a stand and treat all alike and fairly. Until that time comes I believe it to be the duty of every homœopathic physician to refuse to take any insurance with such companies and to use all their influence with their friends and patrons to a like effect.

"Respectfully,

"WARREN D. HOWE,

"July 26, 1897." "Cañon City, Col.

Copy of answer to the above:

"NEW YORK, August 2, 1897.

"DR. WARREN D. HOWE, Cañon City, Col.

"DOCTOR: Your letter of the 26th ult. to President McCall has been referred to me, and its perusal suggests very strongly to me the lines of dear Bobbie Burns:—

> 'O wad some power the giftie gie us,
> To see oursels as others see us.'

"In your letter, Doctor, you imply that the company is arbitrary and dictatorial without cause; is it not true that in the position which you take you are insisting that the company yield to a demand which you make as the *sine qua non* in the matter of your own policy?

"Is it not a little dictatorial and arbitrary to base a general business proposition upon the ground of your letter?

"So far as the facts go, while it is true that the bulk of our examiners are from what is known as the 'regular school,' we have not refused, when occasion seemed to demand, to appoint a medical

gentleman of other schools; and I have in mind several instances in our own experience where medical gentlemen calling themselves Homœopaths have been appointed as our examiners.

"Our company would be very glad to entertain a proposition upon your life the same as on that of any other individual, but we certainly cannot allow ourselves to be influenced by the threat of your withdrawal which your letter surely implies. We remain, Doctor,

[Signed] "Yours truly,

"A. HUNTINGTON, M.D.,

"*Medical Director.*"

Copy of letter to President McCall:

"August 14, 1897.

"JOHN A. MCCALL, *President*, New York Life Insurance Company, New York, N. Y.

"DEAR SIR: Enclosed find copy of letter from Dr. Warren D. Howe of Cañon City, this State, to yourself; also find copy of letter of your medical director to Dr. Howe in answer to the same.

"Dr. Howe has referred the matter to me as Chairman of the Committee on Life Insurance Examiners in the American Institute of Homœopathy.

"This committee has been at work for the past eight years trying to overcome the unjust discrimination of old line insurance companies against members of the homœopathic school as medical examiners. In some instances with gratifying results, in others, notably the New York Life, with most unsatisfactory results.

"Dr. Huntington's most discourteous and ungentlemanly letter in answer to Dr. Howe's straightforward statement of fact, is the letter of a bigot—a man who even neglects the common civility of addressing him as 'Dear Doctor,' and just the man to think that 'dear Bobbie Burns' wrote for the *other* fellow—to a gentleman, and leaves but one course for Dr. Howe and all other self-respecting homœopathic physicians to follow.

"Permit me to state two reasons why you should not allow such discrimination.

"1st. Homœopathy is, and has been for years, in advance of the old school in educational requirements. We, as a school, were the first to demand that our colleges require a three-year course of at least six months each with a high grade of education for admission. Almost before the old school reached that standard we demanded that our colleges require a four-year course with the same preliminary education. That the teaching in our colleges is, in their estimation, equal to that in their own is evidenced by the resolution passed by the Association of Medical Colleges at the last meeting in Philadelphia, part of which reads 'To graduates and students of homœopathic and eclectic medicine (credit shall be given for) as many years as they attended these colleges.'

"2d. We, through our patrons, furnish the insurance companies with a large per cent. of their insurance. To ascertain the percentage of insurance furnished by patrons of Homœopathy, I have, through friends in different insurance companies, noted the answer to the question, 'Who is your family physician?' and thus learned that out of a total of $3,385,250 patrons of Homœopathy applied for $1,174,400, or thirty-five per cent. That our average policy was $3,752, while the average patron of allopathy was $2,418. Our percentage of physicians in the territory covered by these examinations is fourteen; our insurance, thirty-five. These figures represent the aggregate examined in four companies. The least furnished in any of them was thirty-three per cent. In all of them our average policy is much larger than theirs.

"These are facts. They speak for themselves to men of sense.

"Dr. Huntington says, 'I have in mind several instances in our own experience where medical gentlemen calling themselves Homœopaths have been appointed as our examiners.'

"Our committee has looked long and hard for them, and we are strongly of the opinion that it is a matter of memory with him and not one of record. Certain it is that neither your office nor your agents in the cities named in Dr. Howe's letter to you have furnished me with the name of a single 'gentleman calling himself Homœopath.' If you have been forced to accept Homœopaths in a few small, out-of-the-way places where you could not get old-school men it does not alter the fact that you discriminate almost to the point of exclusion.

"Why this discrimination? Is it just? Is it honorable?

"At the recent session of the American Institute of Homœopathy I was authorized to publish and distribute throughout the United States the treatment accorded us by the various old line insurance companies. I shall be pleased to know from *you*, as president of the New York Life, what you can offer in extenuation of the course your company has pursued toward us whose only sin is that we believe in the law of similars. If you answer that your medical director has charge of that matter, kindly state why a company doing business on the scale you do should place it in the hands of one man to work an injustice to such a large percentage of your patrons, and then allow him, through bigotry, to continue that injustice from year to year?

"What use may be made of the facts I shall present to our friends I do not know, but if it shall result in many or most of them using their influence against your company, please bear in mind that you, and not they, have taken the initiative. We ask at your hands simply justice, and this we shall insist upon with all the force that in us lies.

"Trusting that this may appeal to your sense of justice, and that, through you, your company may do something to remedy the injustice to us now existing, I am, Yours respectfully,

"D. A. STRICKLER."

"P. S.—In the foregoing I have not gone into the relative merits of the therapeutics of the two schools—you are interested in this only

indirectly, in just so far as the best will give your patrons a longer life. I take the liberty, however, of mailing you for your perusal a small pamphlet, never yet answered by our opponents,* showing the comparative result as recorded in the different health offices.

"This question is wholly incidental to the main question, and is used now only parenthetically to show that on this ground you should not discriminate against us. Very truly,

"D. A. S."

In answer to the foregoing we received President John A. McCall's business card, on which was written, in pencil, "Thanks for your paper."

Comment seems unnecessary. The issue is clearly drawn. Dr. Howe writes a straightforward business letter, the import of which is "if you discriminate against us without cause I cannot patronize you." He asks nothing personally in return, but the medical director writes a letter that all must know was intended to insult the doctor, and which every homœopathic physician can take home if he will.

Dr. Howe refers the letters to the chairman of the Committee on Life Insurance Examiners of the American Institute of Homœopathy with the result noted.

The company evidently has no reason to give for its course and no intention to change it. It challenges us to do our worst.

The writer does not look upon this as a personal matter. He did not write a personal letter, but one representing the oldest national medical association in the United States, which in turn is the national representative of from 12,000 to 15,000 physicians and many millions of patients.

Shall you, gentlemen of the homœopathic profession, allow this insult to go unrebuked? Do you believe that your patrons, believers in Homœopathy, and knowing these facts, will stand idly by and see it thus slurred by an octopus like the New York Life Insurance Company? The remedy is in your hands. Use it if you will!

In conclusion, your Committee believes that it has made some progress each year. That, owing to the facts that the medical director in the old line companies is in every instance an old-school physician, and that the companies look upon their business as their own private affair, this progress is, of necessity, slow. That by persistent and courteous presentation to the officials of the different companies, of the facts of our position as a school, of the discrimination against us now made by the companies, and of the large amounts of

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"* This little pamphlet shows that the Allopaths, for the *same* amount of work reported to the various city health offices, sign one hundred and eighty-one death certificates to the Homœopath's one hundred.

insurance furnished by patrons of Homœopathy, will most speedily gain for us our rightful position with the insurance companies.

Respectfully submitted,

DAVID A. STRICKLER, M.D.

Chairman of Committee.

Received and referred to Committee on Publication.

The Committee on Medical Literature, through its Chairman, Dr. Charles Gatchell, of Chicago, reported as follows:

REPORT OF THE COMMITTEE ON MEDICAL LITERATURE.

Mr. President:

Your Committee has but a brief report to make this year. The number of volumes issued from the press during the period that has elapsed since our last meeting has not been so great as usual. But this is no cause for regret, since the character of the works that have been put forth is fully up to the high standard of recent years. Moreover, our publishers have announced, for future issue, a series of important works, indicating that our authors are not idle. Our literature will soon be enriched by this product of their labors.

Of the works included in the present report, the two which, we think, call for special mention are, in this country, another one of the valuable historical works that Dr. Thomas Lindsley Bradford has been adding to our literature. The volume to which we refer is his recent one on "The Pioneers of Homœopathy." Of the notable books issued abroad we would mention the first part of Dr. Richard Hughes's "Repertory to the Cyclopedia of Drug Pathogenesy."

The books, by title, are as follows:

"Transactions of the Fifty-Third Session of the American Institute of Homœopathy. Held at Buffalo, N. Y., June 24, 1897." Edited by Eugene H. Porter, M.A., M.D., General Secretary. New York: Trow Printing Company. 1897.

"The Pioneers of Homœopathy." Compiled by Thomas Lindsley Bradford, M.D. Philadelphia: Bœricke & Tafel. 1897. Pp. 677.

"Nervous Diseases, with Homœopathic Treatment." By Joseph T. O'Connor, M.D., Ph.D., Professor of Nervous Diseases in the New York Homœopathic Medical College and Hospital, etc. Illustrated. Pp. 416. New York: Bœricke, Runyon & Ernesty. 1898.

"Medical and Surgical Diseases of the Kidneys and Uterus." By Bukk G. Carleton, M.D. Illustrated. New York: Bœricke, Runyon & Ernesty. 1898. Pp. 253.

"Lectures on Nervous and Mental Diseases." By Charles Sinclaire Elliott, M.D., St. Louis, Mo., Consulting Neurologist of the Missouri State Insane Asylum. New York: A. L. Chatterton & Co. 1897.

"Principles of Medicine." By Charles S. Mack, M.D. Chicago, Ill.: The W. T. Keener Co. Pp. 133.

"A Practical Treatise of Appendicitis." Prepared especially for the Use of Students and General Practitioners. By Howard Crutcher, M.D. Illustrated. Chicago, Ill.: Hahnemann Publishing Company. 1897.

"Saw Palmetto (Sabal Serrulata, Serenoa Serrulata); Its History, Botany, Chemistry, Pharmacology, Provings, Clinical Experience, and Therapeutic Applications." By Edwin M. Hale, M.D. Philadelphia: Bœricke & Tafel. 1898.

"The Prescriber: A Dictionary of the New Therapeutics." By John H. Clarke, M.D., F.R.G.S., London. American Edition. Philadelphia: Bœricke & Tafel, 1898.

"Alaska: Its Neglected Past, Its Brilliant Future." By Bushrod W. James. Philadelphia: Sunshine Publishing Company. 1898. Pp. 450.

"Repertory of the Homœopathic Materia Medica." By J. T. Kent, M.D. Lancaster Examiner Printing House. 1898.

"Climatography of the Salt River Valley Region of Arizona, the Land of Health and Sunshine." By William Lawrence Woodruff, M.D. Chicago, Ill.: R. R. Donnelly & Sons. Pp. 72.

"Handbook on Diseases of the Heart." By Thomas C. Duncan, M.D. Chicago, Ill.: Halsey Bros. Company. 1898.

"A Repertory to the Cyclopedia of Drug Pathogenesy." Compiled by Richard Hughes, M.D. Part I. Introduction; Nervous System; Head. London: E. Gould & Son, 59 Moorgate Street, E. C.

"Transactions of the International Homœopathic Congress." London: Adlard & Son. Bartholomew Close, E. C. 1896. Pp. 738.

"Pharmacopée Homœopathique Française. Redigée sous le patronage de la Société Française d'Homœopathie." Par H. Ecalle, L. Delpech, et A. Peuvrier, Pharmaciens à Paris, avec la collaboration de MM. les Docteurs Marc Jousset et Vincent Léon-Simon. Demy 8vo, pp. 408, in paper wrapper. Paris: Librairie J. B. Baillière et Fils. 1898.

"Handbook of Homœopathic Practice: Instructions for the Clinical Examination of the Sick and their Treatment according to Homœopathic Principles, with Complete Dietary and special Reference to Tropical Diseases." By C. G. Puhlmann, M.D., translated by J. Foster, M.D. Pages 609, with 136 illustrations and two colored plates. Leipzig: Dr. Wilmar Schwabe. Price, half leather, 12 shillings.

"Transactions of the Homœopathic Medical Society of the State of New York, for the Year 1897." Volume XXXII. Edited by the Secretary, John L. Moffat, B.S., M.D. Brooklyn, 1898. Pp. 323.

"Transactions of the Thirty-third Session of the Homœopathic Medical Society of the State of Pennsylvania. Held at Scranton, September 21, 22, and 23, 1897." Philadelphia: Sherman & Co., Printers. 1898. Pp. 435.

"Proceedings of the Thirty-third Annual Session of the Homœopathic Medical Society of the State of Ohio, held in Akron, Ohio, May 11 and 12, 1897." Edited by the Secretary. Pp. 248.

New Journals.

In the past year two new periodicals have entered the field of journalism:

Homœopathic Journal of Surgery and Gynecology. Editor, Charles E. Fisher, M.D. Publisher, Medical Century Company, Chicago & New York. Pages —. Bi-Monthly. Subscription price, $5.

The Syracuse Clinic. Editorial Staff, E. Elmer Keeler, M.D., and others. Published at 452 South Salina Street, Syracuse, N. Y. Pages, 12. Quarterly. Subscription price, 25 cents a year.

A number of changes in other journals have been made, which will be reported by another committee. Respectfully submitted,

Charles Gatchell.

The Section in Materia Medica, through its chairman, reported having held two sessions; papers were read and discussion had. All papers have been turned in to the proper official. Report accepted and referred to the Committee on Publication.

The President appointed Dr. T. L. Hazard of Iowa City, Ia., as Chairman of the Section in Materia Medica for the ensuing session of the Institute.

Dr. Dudley: To return now to Section 2 of Article VII. of the By-Laws. Add after the word Chairman, as it occurs in the last line but one the following: The Interstate Committee shall consist of two members from each State to be appointed by the respective State societies. The chairman shall be elected by the Committee. Duly seconded.

Dr. Custis: Does not Dr. Talbot hold the chairmanship of that Committee, and by courtesy does he not hold over?

The President suggested that action be deferred upon the motion of Dr. Dudley for the present.

Dr. Peck, for the Censors: The Censors would further report on the application for membership of E. W. Sawyer, of Chicago, having been referred to them for investigation, it finds that it has had no quorum present during this session, and therefore it is incompetent and has not been able to investigate the matter. It would also request that written charges and specifications be presented against Dr. Sawyer.

Dr. Allen: I rise for information. Has the Board of Censors been acting without a quorum throughout the session?

Dr. Peck: The attention of the Institute has been called to that

fact. The Institute has accepted the report of the Board of Censors, and, with the exception of the case before us, no objection has been made and no charges have been preferred against any individual. But this is a different matter, and the Board does not feel that it can go on in this matter without help from the Institute.

Dr. Price: The office of Censor is an elective one, and is not appointive. Now those who have been appointed for those who were elected, but are absent, can they act in conjunction with the elected members? In this matter of Dr. Sawyer, I would think not.

The President: No provision is made for electing any officer unless it is at the beginning of the year. Certainly the presiding officer, if anybody, has authority to fill a vacancy. He must have it. I can't understand who else could have it.

Dr. Kinyon said that the custom had been while he was a member of the Board for the Institute to nominate and elect its own members of the Board to fill vacancies.

Dr. Dudley: I believe that the President has full power to appoint *ad interim*. Suppose, suddenly, our Treasurer and Assistant Treasurer should both die, would the President not have authority to fill that vacancy temporarily?

Several members: But this is not a parallel case. The Institute is in session. It is ready to make its own elections.

Dr. Wright: The By-laws make it the duty of the President to fill these offices in case of vacancy. Otherwise we could fill no office of those who are absent from the sessions, whether dead or alive.

Dr. Duncan: This report of the Censors can very easily be regarded as a minority report, and if the Institute chooses to accept the minority instead of the majority report, it certainly has that right.

Dr. McClelland: When it is agreeable to the Board of Censors they can make a minority report, and the Institute has the right to govern its own membership. These additional members are simply appointed during the absence of the elected or appointed parties. But when a judicial duty is asked of a Committee I think it is quite a different thing. There should be then a majority of the Committee, or, at any rate, a quorum, of the Committee present.

Dr. Allen made the point of order that in the reference of this application to the Board of Censors, the original report was out of order, because it was not acted upon by a full Board, nor even a quorum.

If no one objects the decision of the chair is sustained.

Dr. Duncan: We don't know where we are going. We don't want

to do anything illegal. It seems to me that a legal construction, if it comes before a court, it would say, that the five members who are to pass must be the original five members, or at least three of the five who were elected.

Dr. Gatchell: A few minutes ago I reported for the Committee on Medical Literature, and yet I am the only member who is present. That report was accepted.

Dr. Custis said that Dr. Gatchell's committee is an appointive committee. He moved to lay this question on the table. Seconded and carried; ayes, 35; noes, 8. This disposes of the question of the President's appointments to elective office during sessions of the Institute to fill vacancy.

Dr. W. D. Foster presented the following resolution:

Whereas, At the last meeting of this Institute at Buffalo, notice of approval of the action of the Governor of Missouri, in turning over to homœopathic control the largest insane asylum in that State, and

Whereas, The management of the affairs of that institution has been such as to reflect great credit upon our system of therapeutics: therefore,

Resolved, that we now, again, put on record our most hearty approval and recognition of Governor Stephens's wise policy.

Referred to the Committee on Resolutions.

The Section in Surgery reported through its Chairman, Dr. J. Kent Sanders, with all papers turned in to the proper officer.

June 28, 1898.

The Chairman of the Section of Surgery begs to report to the President that a successful session was held on Saturday, from 3.00 P.M. to 5.30 P.M., and on Monday, from 11.00 A.M. to 1.30 P.M. Nine papers were presented, and eight papers read. The discussion was general, being participated in by many.

Respectfully submitted,

JOHN KENT SANDERS.

The President appointed Dr. W. W. Van Lennep, of Philadelphia, as Chairman of the Section in Surgery for next year.

SIXTH DAY—AFTERNOON SESSION.

After the Board of Censors had read the name of one applicant, Dr. McClelland proposed a standing resolution, having reference to the filling of vacancies at the meeting of the Institute, both in appointive and elective offices. Referred.

The Committee on Resolutions returned, and, with their recommendation, the Resolution of appreciation and thanks to Governor Stephens of Missouri; and, also, the resolution thanking The Eclectic Medical Association for its expression of welcome and fellow-feeling.

The Institute adopted these resolutions. It also ordered a vote of thanks to Dr. King, of the Press Committee, for his efficient services.

The President then appointed the Standing Committees for the coming year.

SEVENTH DAY—MORNING SESSION.

Wednesday, June 29, 1898.

The Board of Censors, through Dr. Peck, asked for a vote for membership in the Institute on two names already announced and placarded. These members were elected.

Dr. Peck read the name of J. M. W. Cannan, of Kidder, Mo., who applied for membership. Dr. Peck stated that he had just received this application by mail, and it was too late to post the application. The college and references and all other requirements were in satisfactory condition. On motion, the rules were suspended and Dr. Cannan elected a member.

The Censors also recommended the election to honorary and associate membership of Professor E. H. S. Bailey, Professor of Physics and Chemistry in the University of Kansas, residing at Lawrence. Seconded, and, on proper action, was unanimously elected.

Dr. Peck then presented the report of the Board of Censors on the case of Dr. E. W. Sawyer, which had been reconsidered and referred back to them for further action, as follows:

The Board of Censors, to which was referred back the application of Eugene W. Sawyer, M.D., respectfully reports:

It finds, upon careful examination, that the said Sawyer paid into the hands of the Institute, through the proper officials, the sum of $7 when he presented his application for membership; that the instant the vote was declared, announcing the said Sawyer's election, the said money was *de facto* converted into the treasury of this society; that action, over which the Institute had no control, having thus been taken in accordance with said vote of admission, it was out of the power of said Institute to reconsider its vote (see Reed, 1894; Roberts, 1884); that the Board of Censors has no authority in the premises,

and therefore requests that it be relieved from further consideration of the application of said Eugene W. Sawyer.

T. C. DUNCAN,
Chairman.

On motion the report was received.

Dr. H. C. Allen asked for a ruling of the Chair upon the question whether the report of a minority of the Board of Censors constituted a legal report on the application.

Dr. Peck said, in answer, that while that report was signed by Dr. T. C. Duncan, it was the report of T. C. Duncan and himself, regular members of the Board of Censors. And he added that it expressed Dr. Price's sentiments as well.

Dr. Allen: The original motion is what I refer to.

The President: There is a motion before the house.

Dr. Allen: I do not see, Mr. President, how a motion coming before the house prevents the chair from ruling on a point of order. I am asking for a ruling on the application on which he was said to have been elected.

The President: That was decided yesterday by being laid on the table.

Dr. Allen demurred, saying that this doctor was formerly elected a member of the Institute, and then, for reasons stated by him, which were not complimentary to that Institute, he resigned.

Dr. T. Franklin Smith said he would vote for the adoption of the Board of Censors' recommendation, for the reason that Dr. Sawyer was elected a member of this Institute according to its laws. The money was paid over into the treasury, and he is therefore a member of the Institute as anybody else here. Now there must be charges preferred against him, and these must be proven before his name can be taken off the list.

The question being called on the adoption of the recommendation of the Board of Censors in regard to E. W. Sawyer, the motion was put and unanimously carried.

The Board of Censors then announced its work done, having examined and elected an even hundred new members.

The General Secretary read the following names of members of the Institute, asking that their resignations be accepted: Amsden E. Wheeler, Lewis E. Rauterberg, Francis B. Carlton, George Nichols, Jennie S. Dunn-Cary, W. H. Macdonald, A. F. Randall, G. E. White, A. B. Grant, F. H. Dreyer, F. W. Gordon, Byron E. Fortiner, Marian A. MacMaster, F. W. Elliott, Charles N. Hart, C. G. Capron, C. M.

Nordstrom, Eva G. Condon, Katherine L. P. Hickox, Henry B. Esmond.

On motion, these names were stricken from the list of members.

The Section in Pedology reported, through its secretary, Dr. A. M. Linn, as follows:

OMAHA, June 29, 1898.

The Section in Pedology convened in the main hall at 3 P.M., June 28th. A most interesting and profitable session was held. Several papers of much scientific value were presented, and provoked a protracted discussion, covering subjects relating to feeding of infants and the elements and food products essential thereto; the blood composition as affected thereby, the use of the microscope and chemical laboratory in determining disease conditions, both by examination of the blood and of the renal excretions.

All the members of this section save two presented papers. Several who were to lead in discussion were absent. Discussions were limited to five minutes each.

The session was protracted until 6.45 P.M., and the work of the section concluded. Very respectfully,

A. M. LINN,
Secretary.

Dr. A. M. Linn, of Des Moines, was appointed Chairman of Pedology.

The final report of the Section in Ophthalmology, Otology, and Laryngology, was presented by its Secretary, Dr. D. A. Strickler, as follows:

The Section on Ophthalmology, Otology, and Laryngology reports that it held two sessions, one before the general session, and one in special session. The character of papers was such as to excite the interest of the general physician, and the discussions were interesting and, we trust, profitable to all.

A resolution, looking to the closer union of the American Homœopathic Ophthalmology and Otology Society and the Ophthalmology, Otology, and Laryngology section, was passed, and a committee appointed to consult with Dr. A. B. Norton, of the American Homœopathic Ophthalmology and Otology Society and the executive officers of the Institute with this end in view.

Respectfully submitted,
DAVID A. STRICKLER, M.D.,
Secretary.

Dr. H. D. Schenck, of Brooklyn, was appointed chairman of this section.

Dr. Sheldon Leavitt, Chairman, reported for the Section on Gyne-

cology that it had had a pleasant and profitable session, and that all papers are in the hands of the proper officer. Accepted and referred.

Dr. John J. Thompson, of Chicago, was appointed chairman of this section.

The Section in Neurology was declared closed and all papers in the hands of the Secretary. Accepted and referred.

The Section in Obstetrics reported, through Dr. C. B. Kinyon, as closed and all papers handed in. Ordered accepted and referred.

Dr. T. G. Comstock, of St. Louis, was appointed chairman of this section.

The Section on Sanitary Science reported, through Dr. T. C. Duncan. All papers handed in. Accepted and referred.

Dr. J. W. Le Seure, of Batavia, N. Y., was appointed as chairman.

The Committee on Resolutions then presented its final report as follows:

The first resolution had reference to the printing and publication of the Comparative Vital Statistics for 1894, which Dr. Strickler had collected and presented to the Institute, but had not been printed by the Institute.

Dr. Porter raised the point of order that the Committee on Resolutions had no authority to bring in a resolution that had not been first submitted to the Institute and by the Institute to the Committee.

Dr. Delamater: The Committee have made no recommendation.

Dr. Porter: In relation to the omission of these statistical reports, as no member of the Committee on Publication is present, it is proper that I should speak for them. These reports were not thrown in the waste-basket. They were simply held over. You are all aware that our finances last year were not in a good condition, and we were obliged to leave out papers. We would like to have published Dr. Strickler's paper, but we felt that statistics would wait better than current essays. Dr. Strickler understands that now. It was the intention of the Publication Committee to again consider these reports next year. It is for the Institute to decide whether it is wise to establish a precedent to order the Publication Committee to have such paper or papers published.

Dr. Smythe did not agree with the General Secretary on the comparative value between statistics and essays. He believed the statistics collated by Dr. Strickler were invaluable to the profession, far more so than some of the papers that are annually published by the Institute. He referred to an inaccurate table of statistics found in one of our

leading homœopathic journals, and said that if the Strickler statistics had been published the error would have been seen quickly.

Dr. F. J. Boutin spoke in the same vein, adding that he wanted to get at some statistics for a given purpose, but couldn't find them. He thought these statistics ought to be published.

Dr. Peck referred to the fact that he had himself been a sufferer from the difficulty under which the Publication Committee had been laboring. But he believed that they had now received sufficient notice of the desire of the Institute to guide them hereafter. But it might not be well to place ourselves on record as ordering the publication of any specified paper. Therefore he would vote to lay the matter on the table or take some similar action.

Dr. McClelland made the point of order that the resolution had no right to be brought here until it had gone through the proper channels.

The President decided that the point of order was well taken. The motion was therefore dead.

The Committee on Resolutions then reported the proposed standing resolution prepared by Dr. McClelland.

Dr. Porter raised the point that instead of being a standing resolution this was clearly an amendment to the By-Laws, and must therefore lay over for one year.

The Chair sustained the point of order, and the proposed resolution was laid over for one year, Dr. McClelland giving proper notice of this amendment as follows:

The President shall have the power to fill any vacancies that may occur in any committee during or between the sessions of the Institute, when in his judgment it is for the best interests of the Institute.

Vacancies in elective offices may be filled by nomination and election in open meeting during any session of the Institute, to hold such office until the arrival of the regular occupant.

The Executive Committee may at any time, when deemed necessary, fill any vacancy occurring in an elective office between the sessions of the Institute, such appointee to hold office until the opening of the next regular session. Absence from the sessions of the Institute shall constitute a vacancy.

A series of resolutions were then presented as follows:

Resolved, That it is with profound respect that we extend a friendly hand and a "God bless you!" to the First Congregational Church of Omaha and its pastor for the pleasure we had in using the church

edifice for two public meetings. We will also remember with pleasure the excellent music by the organist and by the choir.

Resolved, That in the highly artistic and lovely reception given to our members, and also to the Meissen, by the Hon. G. W. Leininger, we have enjoyed one of the rarest and most delightful functions that has ever been extended us, either in the East or the West. In the whole history of the Institute no opportunity has ever been afforded us to visit an art gallery containing so remarkable a collection of paintings, with such delightful facilities for pleasure and instruction.

Resolved, That the brilliant reception and ball given by the local physicians and their wives was one of the most pleasant features of the week's entertainment.

Resolved, That we express to the Local Committee of Arrangements our pleasure at being with them and our full appreciation of the work done by them, which has resulted in materially advancing the despatch of our business and to the comfort of our members. We can simply say, "Well done, good and faithful servants."

Resolved, by the American Institute, in its fifty-fourth annual session assembled in Omaha, that the press of this exposition city is deserving of, and we hereby tender to the press, our hearty appreciation of the great courtesy and the many favors extended to us. We take pleasure in specially commending the enterprise and thorough organization which has made it possible at this time, with so many interests demanding prominent notice, to give such very full, complete, and accurate reports of our proceedings in the daily papers.

Resolved, by the American Institute of Homœopathy, in annual session assembled in the city of Omaha, that we extend to the Creighton Medical College of this city congratulations on their beautiful and thoroughly equipped building, and that we extend to them our sincere good-will and hopes that they may be successful in the work they are undertaking.

Resolved, That the American Institute of Homœopathy in annual session assembled, take this opportunity to express our entire satisfaction in having accepted the invitation to come to this, "The New White City." We desire to express our warmest thanks to his honor, the Mayor, to the Board of Managers of the Trans-Mississippi Exposition, to the business men of Omaha, and to the citizens generally, realizing that you have, one and all, made our sojourn with you a pleasure that will abide with us.

The American Institute of Homœopathy begs to acknowledge the receipt of the message of congratulation from the Eclectic Medical Association, and in return extends best wishes and fraternal greetings.

Adopted.

Whereas, The Hon. Silas A. Holcomb, Governor of Nebraska, has been the first executive of the State to recognize Homœopathy in the public institutions of the State, and, whereas he has been just toward us in aiding us, by his influence, in our efforts to gain recognition in

the Army, Navy, and Marine Hospital Service of the United States, therefore be it

Resolved, That the American Institute of Homœopathy express to Governor Holcomb its highest appreciation of the justice and honorable dignity of his course.

Whereas, the Hon. William V. Allen, United States Senator from Nebraska, has, at the request of our profession, introduced in the Senate of the United States a resolution known as Senate Rule 164, providing for exact justice in the medical appointments of the Army and Navy and Marine Hospital Service, therefore, be it

Resolved, That the American Institute of Homœopathy extends to Senator Allen its gratitude and commendation for his justice, and requests of him his untiring efforts in the interest of said resolution.

All of which were accepted and adopted.

Dr. T. C. Duncan gave notice of an amendment to the By-Laws, Section I., Article 2. Also an amendment to Article IV. of the By-Laws.

Amendment to By-Laws, Section I., Article 2: "from among those who shall have been active members of this body for fifteen years."

Amendment to Article IV. of By-Laws: "The Board of Censors may hold three meetings during the interim of the Institute sessions for the reception and investigation of applicants for membership."

Dr. McClelland said that a committee was appointed to consider the matter of meeting and time of the next annual session of the Institute. He moved that this committee be instructed to consult with the Executive Committee of the Institute and report their plans, so that the benefits of their work may apply to the next annual session at Atlantic City. It was so ordered.

At this point, 11.50 P.M., there being no further business for the attention of the Institute, President Wright took the occasion to express his thanks to the membership for their kindness and consideration, and then declared the Fifty-fourth Session of the American Institute of Homœopathy adjourned.

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INCLUDING THE

PAPERS AND DISCUSSIONS.

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OF THE

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The Four Pathies: Antipathy, Allopathy, Isopathy, and Homœopathy; Their Place in Therapeutics.

OPENING ADDRESS BY THE CHAIRMAN, ELDRIDGE C. PRICE, M.D.

While very many books and lesser writings have been contributed to the subject of medical history, comparatively little has been written on the Institutes of Medicine. This want is keenly felt by all thoughtful students of medicine, whether in pupilage or clothed with the virile toga of the doctor of medicine. And not only because of dearth of literature is there comparatively little general information possessed by the medical profession at large, but also because very little is taught in our medical colleges of the various methods upon which drugs should be prescribed.

The greater amount of teaching in the older school is empirical, with a possible rational suggestion, and, in our school, empirical, with an attempt to teach Homœopathy and nothing more.

In his book on "The Principles of Medicine," Dr. Mack sets an excellent example of the systematic way in which medicine should be studied. It is this broader idea of good in all things that should dominate all students of medicine, all physicians. Says Shakespeare:

> "There is some soul of good in things evil,
> Would men observingly distil it out."

It is this process of distillation to which the student of medicine should devote himself, the process which extracts from the various theories of therapeutics some "soul of good," which may be systematized for the "healing of the nations."

Unless one has in him, at the very foundation of his nature, his character, a love of the beautiful, of harmony, of law and order, he cannot fully understand the needs nor appreciate the significance of the systematization of the science and art of life's work—whatever be the nature of this work. Unless he feels and knows the difference between what is and what should be, he cannot grasp the significance of this solemn fact. It is this love of harmony, of law and order, which makes the critic, the man who apparently finds fault for the sake of finding fault, but whose ill-nature is apparent only, who is in reality but comparing things as they are with his symmetrical standards, and whose ideals are *true* ideals, who is possessed of an inborn sense of harmony, whose aspirations are parallel with the purpose which guides

the universe, and whose criticism is but an effort to pour oil on the troubled waters of circumstances and bring order out of confusion. It is this spirit of dissatisfaction which is needed to develop science and art.

The homœopathic practitioner of the quarter of the century preceding the one in which we are now working, was not only not instructed in any method of prescribing drugs but the homœopathic, but he was taught to abhor all aid that could not be traced to alleged Homœopathy and to Homœopathy alone. As a result, the practitioner became either a hypocrite—secretly adopting other methods than the homœopathic—he became a fanatic exclusivist, or he openly and honestly acknowledged his application of all things which appealed to his judgment, and thereby earned from his fanatical brethren the unjust stigma of "mongrel." Quite a large number of men were found to be in the first two classes noted, while the third class was not so largely represented. At the present time, however, owing to the general prevalence of tolerance of diverse opinions, and general development of all the arts and sciences, the last group of practitioners far exceeds the other two in numbers. It is this fact which has emboldened me to bring before the American Institute of Homœopathy the topic I have selected for discussion by the Materia Medica Section.

We have outgrown sectarianism. We have at last reached a high ethical plane from which we can proclaim the fact that we are physicians, who reserve to ourselves the right to draw from every field of mental achievement that which will aid in the healing of the sick, whether these contributions are from mechanics, from chemistry, from bacteriology, or from the charmed circle of Homœopathy. We believe in allopathy, in antipathy, and in Homœopathy, each in its own place, and with a scientific reason for our beliefs, and we want the world to know it. For years Homœopathy has been fighting for admittance and recognition among the methods of therapeutics, and she has rightfully attained this position; and now she stands, not on a level with these other time-honored methods, but above them, her titanic form towering heavenward among the eternal verities where she belongs.

The progressive physician of to-day is not an exclusivist; common sense forbids, *science* forbids. He can ignore nothing; he must "keep everlastingly at it," everlastingly hunting for "some soul of good," even in those things which seem most evil. He seeks not the evil—*that* he rejects; but the good he keeps. This good he finds in empiricism, in rationalism, and in the law of similars. He may practise medicine and resort to naught but the dogma of empiricism; he may ignore all other therapeutic aids, and trust only to the logic of rational medicine; he may adopt the teachings of Schuessler or of Hensel, and abide with them alone; or he may confine his ministrations within the sphere of Homœopathy. In any case, he may be honored among men as a physician of merit; but he is not a progressive physician, not one who accepts the whole of truth, or tries to "distil out" as much good from things evil as a consistent observer of facts should

do. This is not orthodoxy, but it is truth; and is it not truth of which we are all in search?

What if, in following truth, we are led away from Homœopathy? It matters not. We will only be led down to and past the foundations of one great truth to another which must be better and stronger. We will only be drawing nearer to fact, to the roots of the universe, to that which is the *cause* of the law of similars. For, if Homœopathy be true, then how much more beautiful, how much more profound must that be to which we are led *through* Homœopathy! However much beyond and above, or beneath, Homœopathy our truth-guided conclusions may reach, we cannot, in the name of Hahnemann, hesitate to follow and abide by them. As yet, no such mountain peaks of thought have been attained; but may not even greater heights and more empyrean altitudes be scaled by the mind of man? We may stand upon the shoulders of Homœopathy, and if we are not blinded by prejudice, we may gaze into the promised land of future scientific possibilities. Is Homœopathy an *ultimate* truth? Is there more beyond? Who can tell?

The work of our section is to consider facts, to discuss facts as they are, and to systematize facts for the scientific, for the artistic, and for the illogical and purely practical workers among us. It is questionable if the average medical practitioner gives proper and sufficient thought to the sphere of the four pathies in therapeutics. This is probably the case in the homœopathic school, and certainly it is true of the members of the older school of medicine. Under what circumstances may these pathies be applied? This is a question few physicians can answer correctly; and yet it is a subject with which every practitioner should be familiar. Outside the sphere of chemistry and germicidal therapeutics, no drug can be prescribed whose action may not be explained in accordance with one of the pathies noted. Furthermore, it is a fact that there are some conditions in which Homœopathy is not applicable, and an attempt to drag it out of its proper sphere of application and force it into the sphere of any other principle is absurd. It is incumbent, therefore, upon the homœopathic practitioner, that he know not only when the law of similars is applicable, but that he also know when it is not applicable (just as the surgeon knows both when to cut and when not to cut), and when the law of similars is not applicable he should know where to look for aid outside the pale of Homœopathy.

Our position as a school has never yet been declared in relation to the pathies, in accordance with facts. Every practitioner of experience knows there are cases which demand, at times, certain other measures than those prescribed by Homœopathy. He knows he is at times compelled to resort to these other methods. He should, therefore, be prepared to accept such facts, and be properly qualified to meet them by a studied familiarity with the circumstances and conditions of the application of all the useful methods known to therapeutics.

I fear it does not require a stretch of the imagination to discover

uprisings in the breasts of some of this assembly, certain shakings of the head, and unspoken protests against the statements I have just made; but I am saying nothing against Homœopathy; I am not attempting to substitute anything for Homœopathy; I have not said Homœopathy is of less importance than the other pathies (nay, I have said Homœopathy is of *more* importance than the other pathies); and I am not trying to lessen the sphere of Homœopathy in any particular. I am simply stating demonstrable facts; facts that must be acknowledged if we wish to secure the best results in practice, and if we wish to apply therapeutics in accordance with science, with truth.

When we endeavor to apply Homœopathy outside its proper sphere we are stultifying ourselves and attempting a false interpretation of the law of similars. To prevent such a mistake our section will attempt to suggest the remedy.

Antipathy.

By J. S. Mitchell, M.D., Chicago, Ill.

The war of the pathies goes steadily on. We are apparently not much nearer an agreement than before. I was about to believe a truce had been declared when I read that the President of the American Medical Association just said in his annual address, there was nothing to prevent the members from using the 100th of carbo. veg. But when, a little later, I found at the very same meeting that one member asserted with hearty applause that the New York Medical Society, by agreeing to counsel with Homœopaths, had introduced a sepsis into the medical body politic that had tainted it with the virus of commercialism, I changed my mind. Allopathy, Homœopathy, antipathy, and isopathy claim, by turns, attention from the medical world. Fierce have been the contentions of their respective adherents, and futile the efforts to establish unity of medical thought and practice. Yet all the while people sicken and die.

Thus has it ever been. It is the way of the world, it is the way of other sciences, and so the self-same way obtrudes itself into medicine.

There is nothing strange about all this. It is well-nigh universal practice. The greater includes the less, so the analogy holds true with methods.

Shall we wield the knife early, or not at all, for appendicitis? Is operation a *pis aller* for carcinoma, or the best course?

Is the American operation ever indicated or should it be relegated to the shades? Have we come to the passing of the reflexes, or shall we still have fourteen pelvic operations for a patient with an occasional convulsion?

Even single drugs do not escape the same indictment. Salicylic acid holds sway for awhile, but it has to give way to phenacetine. The coal-tar derivatives will be in vogue until the conservative men of the old school realize their fatal influence on the heart and kidneys, and sound a note of warning. Then drugs less potent for evil will supersede these synthetic compounds. It is almost pitiful to read in the last work on the diseases of the chest, published by the combined labors of an eminent physician and a surgeon in the year of our Lord, 1898, "that we still use creosote, guaiacol, and benzosol in phthisis for want of something better." Such a veteran therapeutist as Hare has lately *discovered* that strychnine is not so valuable a diffusive stimulant as camphor.

Even so simple a thing as the use of foods, follows the same rule.

We contend to-day for a diet largely vegetable, to-morrow for one mainly animal. Lately, we have to record the passing of milk diet for Bright's disease, which was so long and universally standard.

There are fashions in drugs and methods as in clothes, and woe betide the unlucky wight who is not in at the correct time and the orthodox way. All this indicates that we are seeking continually after strange gods, and standing with our hand on the door-knob to welcome the next new stranger who comes, with a blare of trumpets and the shouts of a far too often unmerited triumph.

The public catches the infection. The Homœopath becomes more allopathic, and the allopath turns to Christian Science. Both rush to frequent and rash operations, by times, and then back to a denial of the knife to its manifest needs.

No wonder Brunetière wrote in 1895 on the "Bankruptcy of Science," and that now Tolstoi comes out with a vigorous diatribe on its inadequacy. Tolstoi is in a way cruelly correct. We have a penchant for getting away from the reality into a field foreign to man and leaving pressing and important problems unsolved.

What does this indecision and confusion in the medical world mean? Those who argue that the segregation into sects and cliques is an evidence of moral obliquity little realize how honestly varied in its phases is human nature, and miss the main point, that men can all be actuated by one grand purpose and attempt to further it in widely different ways. Desirable as is unity in the medical world it would be dearly purchased by the surrender of our individuality.

We pride ourselves that in the division and strife just outlined, Homœopathy remains the same; that it is now as it was in the days of Hahnemann, Boenninghausen, Herring, and Carroll Dunham, the science of therapeutics. So indeed it is in all its essential features. No method has held such sway for a whole century. But we have not escaped entirely from dissensions in our ranks. Hahnemann himself, no mean adept in the use of vigorous terms, even in his day, spoke of the bastard Homœopaths. We have been wont to use the term, mongrel, for those not conforming strictly to the law. Even an epithet has been applied by ourselves to those using principally the high dilutions.

We have those who use the combination tablet with its return to poly-pharmacy. We have those who mix several remedies in one glass as a similar procedure. We certainly have a far wider use by no inconsiderable class of our men of tonics and purgatives—a concession to antipathy. We find many of our surgeons of the present day largely abandoning homœopathic remedies after operations, and substituting the palliative use of morphine. Are not our journals, in large measure, devoted to the consideration of general medicine rather than to reports of cases treated strictly by homœopathic remedies?

But, as we have already seen, this is only an inevitable result of the working of the human mind. We are, however, seriously to consider whether our present lines are calculated to advance Homœop-

athy to a higher plane, or prepare it for a gradual absorption into the one great medical school of the ages. We must meet this question calmly and judicially.

It would be much more pleasant to form a committee of the whole, resolve it into a mutual society, and speak only of what is agreeable and what inspires our pride, but that does not promote growth. No more, however, should there be a carping criticism that seizes on slight deviations and magnifies them into major ways.

I am asked in this discussion to portray the part played by antipathy in the struggle we have referred to as challenging always the deep interest of the medical world. Any method which succeeds in getting itself deeply enough interwoven into the medical fabric to remain a permanent feature, must perforce have attractive features. Although it is true that it has only been a phase of that greater system which we have called allopathy, it has so deeply impressed itself upon all medical practice that it may be dignified as a true therapeutic mode.

Brunonism is now history, but its seductive practice is still attractive to the practitioner and grateful, for a time, to the patient.

I find no clear definition of antipathy—so I venture one myself. Affections, or symptoms, indicating morbid states are cured by remedies inducing opposite symptoms or affections. A diarrhœa is cured by an astringent—a constipation, by a cathartic—insomnia, by a hypnotic—fever, by a cold application—pain, by a narcotic, and debility by alcoholic stimulants.

The old school rightly deny that allopathy means only *contraria contraries curantur*, because it has something more than this rule of practice for a basis.

Enantiopathy is merely a synonym of antipathy.

Brown was a pupil of that careful practitioner and keen observer Cullen.

His classification of diseases was simple, embracing only two genera.

1.—Diseases of augmented irritation and increased excitement. sthenic.

2.—Diseases of diminished irritation and tissue excitement. asthenic.

His therapeutics was equally simple. He employed only two classes of remedies, viz., excitants and depressants.

As a matter of fact, Brown and his disciples believed ninety-seven per cent. of disease to be due to debility (asthenic), and stimulants were prescribed to an enormous extent. He died in 1788 of intemperance, a victim to his own views.

Still, he founded a system which had a decided influence upon medicine during his time. It agitated for years the University of Edinburgh. It invaded Germany and Italy with a large measure of success. It found less favor in France since other systems were strongly entrenched, viz.: the anatomical method at the school of

Paris, and the vitalism of Barthez at Montpelier. That it affects medicine of to-day still powerfully, we certainly have demonstrated.

But we must distinguish it carefully from allopathy, of which we have said it is only a part.

Allopathy may be defined as the sum of all the therapeutic systems ever proposed except Homœopathy. Hahnemann recognized it as distinct from both similia and contraria, and as using remedies heterogeneous to the symptoms.

The dogmatism of Galen, the empiricism of Paracelsus, the antipathy of Brown, the vitalism of Barthez, the mysticism of Van Helmont, the iatro-chymia of Sylvius, all are accepted in turn, but the scientific system of Hahnemann, which has held sway longer than any one of the whole motley group and which adapts itself readily to each new modern theory of medicine, is still persistently ostracized.

Talking one day with a very prominent practitioner of the old school, he said he did not blame physicians for not recognizing Hahnemann, because he so bitterly reviled his professional brethren on account of their views. But did not Galen accuse his fellow-practitioners of base jealousy and stupid ignorance? Did he not brand them as thieves and poisoners? Did not Paracelsus burn up the works of Galen and Avicenna publicly? And did he not declaim: "Know, ye doctors, that my hat knows more than you—that my beard has more experience than your academies."

Our school has, at all times, given some recognition to antipathy—Rapou, historian, of the homœopathic doctrine, assigns quite a prominent place to enantiopathy, as he terms it.

Hahnemann, in the "Organon," clearly advises to remove the *causa occasionalis*, viz.: "evacuate the berries of belladonna, etc., which have been swallowed, by vomiting, extrace foreign bodies, and grind down stone in bladder."

It is not such a far cry from this to a cathartic for impacted bowels, to the removal of microbes by disinfectants, to the use of stimulants for temporary depressions, or palliatives for transient pains.

Dake says: "It has also been claimed that cures are effected by drugs acting antipathically. So far as palliation, stimulation, and other measures resorted to in diseases self-limited, or in cases where the forces of life must be sustained by direct support, this claim has force."

Small wonder, then, especially when you consider the seductive nature of the practice, that much antipathy has crept into the practice of our own school.

It takes a well-educated, conscientious physician, with many of the characteristics of a judge, to determine where a line is to be drawn.

We all endorse most highly Hahnemann's scathing denunciations of antipathy as employed for chronic affections. We all know the baleful effects of stimulants, opium, valerian, digitalis, and electricity, when used antipathically, for continued periods.

Shall we say, however, there is no value in any of the old methods? Truly, we cannot, if we accept Hahnemann's view, that had physicians been capable of reflecting upon the sad results of antipathy, they would long ago have arrived at the great truth that a path directly opposite would lead them to a method of treatment by which they might cure disease perfectly and permanently.

They would have discovered that, if a medicinal effect contrary to the symptoms of the malady, viz.: antipathic treatment, only procured momentary relief, at the expiration of which the evil constantly grows worse, by the same rule the reverse method, that is in the homœopathic application of medicines, administered according to the analogy existing between the symptoms they excite and those of the disease itself, must necessarily bring about a perfect and permanent cure.

Here we find, according to our best authority, that a wrong method might be made very valuable by suggesting the true one.

This very thought is adequate to explain why we are not discouraged at the mass of contradictory views held, the conflicting methods advocated and our changing fashions in drug use.

Evolution in medicine has, in the long run, always led us to something better and it always will.

To illustrate the power for good as well as for evil of antipathy, let us contrast two familiar examples of its use. The oculist prescribes atropin in iritis, and the dilated pupil gives less pain, and the danger of adhesion is removed. In glaucoma he uses eserin, contracts the pupil, stops the ciliary neuralgia, relieves the patient and, possibly, saves an iridectomy. In both cases the antipathy is salutary if the *causa occasionalis* is removed, and a cure is made.

Per contra, the most striking instance of the misuse of antipathy, because the most general, is in the employment of stimulants. We hasten to them in almost all cases of loss of vital force. We are not always particular about the dose. As a rule the more profound the collapse, the larger it is. I have seen two ounces of whiskey given every two hours marked on many a hospital sheet. We lose sight of the fact that alcohol, except in small doses, is a depressant of high rank. We forget that a man can get dead drunk, and even be fatally poisoned by alcohol. How many physicians, as they prescribe large doses of whiskey in typhoid or cardiac failure, stop to think of Anstie's graphic description of the effects of alcohol?

In small doses only is it a stimulant. In large doses it is a narcotic and paralyzer. By the unfailing test of the sphygmograph, which represents the degree of arterial tension present, it appears that the small vessels, when relaxed in a condition of fatigue, are brought by a small dose of alcohol to a proper tension from which they suffer no recoil. If, on the contrary, the dose has been immoderate, the pulse-waves give a precisely opposite indication, that, namely, which proves that arterial relaxation has occurred, and simultaneously with this the pulse becomes abnormally quick.

As another instance of the prompt effect and injurious result of antipathy, we may adduce the use of the antispasmodic, bromide of potassium. It stops the paroxysm and temporarily wins plaudits, but when the inevitable bromism appears, it is found the short respite has been procured at a heavy cost. The effect of sulphonal and trionol upon insomnia is far too brief for the certain ill resulting to the kidneys and heart soon to ensue.

Some two or three years since I predicted to my medical classes a great accession to our cases of sudden death as a result of the popular and excessive use of the coal-tar derivatives. The crop is now being garnered. The latest, and as claimed, most innocent one, kyrofine, notwithstanding its enthusiastic advocacy, must be regarded as under the same ban. Yet its exceptional use antipathically, as for instance in locomotor ataxia, may be justified.

After this discussion of antipathy and its reference to other systems, I should be recreant to my duty as a physician, and to the object of the materia medica bureau, if I did not strive to evolve out of it something practical.

It enables us to realize how much we owe to Hahnemann for giving us a law which has for so many years stood the most practical tests, and about which we could group an extended series of favorable clinical experiences.

We fully realize the difficulty of attempting to explain the modus operandi of any therapeutic law. Our own authorities in materia medica do not agree as to the mode of operation of our remedies.

To my mind no one has so closely hit the true philosophy as William Bayes, by his theory of specific restorative medication. It explains alike the cures made by Homœopathy, allopathy, and antipathy, and shows while the two last occasionally make cures, the first is the real science of therapeutics, because its course is to always administer a drug which shall bring the parts, tracts, or organs affected up to the point of health, in so gentle and gradual a manner that there shall be no recoil. It helps us to realize why one man makes many cures with the first, or the second, and another with a far higher dilution. It teaches us to explain the therapeutics of the germ theory with its corollary of ptomaïne poisoning, for we find we require a medicine not so much to destroy the germ as to put the part, organ, or tissues diseased, in a condition of such stimulation and tone, that they can neutralize the generated poison. It is clearly evident, however, from published utterances, that this view is not acceptable to some of our leading men.

I am not a therapeutic nihilist by any means. I agree with Amedie Latour that, "It is therapeutics which elevates and ennobles our art. It alone gives to medicine an object: and I may add, by it alone can the art of healing be raised to a science."

That observations must be many, and the judgment in estimation good, should not appall us in the least. There are few observers in our school like Hahnemann and Herring, and in the old school,

like Sydenham, Mobius, and Loomis. Is it not because we have so few competent judges and practical physicians, who record their experiences, that Homœopathy fails to make the progress it should by every consideration?

Our own scepticism is also to blame. If all our physicians manifested stronger faith other men would be led. In the early days of our cause, when our pioneers were delivering sledge-hammer blows at seductive and injurious methods, and deluging our literature with practical evidences of the wonderful beneficial effects of Homœopathy, we gained constantly new accessions to our ranks, of many stalwart allopaths. There are comparatively few recruits from that source now. Do we impress the men of the old school in our large cities so that they come over to us in such numbers that they compensate for the desertions from our school to them? Our colleges, it is true, add continually to our number, but that is a slow addition. It should be the duty of our school to make itself felt in the ranks of all who make medicine a profession.

It is a fact that in the growth of every reform one of its strongest features is the impression it makes upon parties who differ. We all know how profound this has been, but we must not deceive ourselves as to its extent. Dr. Charles Gatchell demonstrated in his exhaustive and scholarly paper, read at the World's Congress in 1891, it is not as great as we might wish. We can certainly say it has not been added to in the last five years in a marked degree. We can admit it is by careful experimental work, guided by the laws of similia, that physicians have ceased to be themselves the most violent detractors of medicine. Much as we ourselves have differed as to the minor methods none of us have ever cut loose from the law which Hahnemann enunciated, and so firmly established on a scientific basis. Practically, then, I see no indications for us but to work more persistently and effectively upon the same lines as those followed by the earlier Homœopaths, and continued in a measure since by many in our ranks. To illustrate, take such papers as the one read by Dr. C. Wesselhoeft on pneumonia, at the Institute in 1894, and the one by Dr. Adolph Gerstel on mebereon, at the World's Congress, 1876, as a basis for work. Let our journals, our state, our local meetings fairly teem with articles fashioned after such models. Let our physicians in active practice throw in a flood of carefully prepared records of their use of our remedies, and an impetus would be given to Homœopathy that would lift it in a year. Especially should our young men who are internes in the hospitals, be urged to collate for the clinical staff ample material. The work done in our insane asylums stands to-day as our best exponent.

True, as has been asserted in these discussions, empiricism has done as yet comparatively little for medicine. Grauvogl says, "Material obtained by experience is not rational; it is nothing more than the accumulation of facts, and it has no scientific value if it cannot be brought into connection with the lawful course of things." But a later writer in *The Popular Science Monthly*, defined science as "real

knowledge properly classified." Another more liberal writer calls it "classified probabilities," and as we have already seen, Brunetière declaims on the bankruptcy of science.

We have stood in too much terror of this bugaboo of science. As has been demonstrated repeatedly by the discussions in the materia medica conferences, in the sessions of the American Institute, and in the World's Congress of Homœopathy, our great lights have differed very much as to how homœopathic remedies act, and even the view recently referred to, which to my mind seems simple and conclusive, has been condemned.

What we need is a larger number of carefully ascertained facts, so accurately stated, that we shall be able by the inherent evidences they possess, to assign their value.

We deduce more quickly than of old. It does not take us so long to reach the passing of nerve stretching and suspension for nervous diseases, as it did that of venesection.

So, I am now willing to stand up and be counted as cherishing a very deep affection for empiricism in its best sense. I agree with Renouard that medicine that has cured disease, must cure equally all disease analogous to it, and with the deduced precept to treat each case by means whose efficacy has been demonstrated, by experience in homogeneous cases. Proceeding on this basis we can make such deduction or induction as may be suggested. Such an empiro-methodism may be scientifically constituted, and we do not need to call to our aid physio-pathological theories.

It is true as Hippocrates said, "That experience is fallacious"; but may we not amend it to, "Good experience is not fallacious."

Don Quixote said to Sancho: "Experience is the mother of all the sciences."

Hahnemann's first enunciation in the "Organon," is that the sole duty of the physician is to heal the sick. I am willing to admit that I have very little reverence for anything which does not effect this object, even if it has the sanction of all the authorities from Hippocrates to Hahnemann. We ought to have such records of our treatment that an educated, experienced physician may decide whether the result is due to the *vis medicatrix naturæ*, the removal of the *causa occasionalis*, the termination of a self-limited disease, or is so contrary to ordinary experience, that we can stay at once *à bas* with your report, or that it is worthy to be transferred promptly to the ledger of true therapeutic experience.

Homœopathy is yet to challenge from the medical world greater attention than it has yet secured. We should make physicians crowd in to hear how we cure disease, as they flocked to Berlin to hear Koch, when his first tuberculinum was announced, and cause patients to come to us as they did to Hahnemann in Paris, and so we must build such a grand structure as a temple of therapeutics, that Homœopathy will be raised within it to the plane of an exact science.

Then we trust we can go to our work, the cure of the sick, so fortified with knowledge and skill, that our conquest over disease will be like a Dewey victory.

Discussion.

H. H. Baxter, M.D., Cleveland, O.: I take it that the object which the writer of a paper has in view is twofold. First, to present such new matter, or new ideas, as may have come to him as a result of his experience and observation, and second, to excite thought on the part of his hearers or readers that shall lead to logical conclusions of practical value to them and others.

Of the many thoughts which his paper suggests, I desire to speak of only two. One is the question, To what extent are we justified in the use of antipathic or other measures not strictly homœopathic, in the treatment of disease?

Dr. Mitchell concedes, and I think most practitioners will agree with him, that the use of such measures occasionally is justifiable. That we are, first of all, physicians, whose duty it is to heal the sick, is an old Hahnemannic axiom. That this can be accomplished sometimes speedily, completely, and safely by the use of antipathic measures Dr. Mitchell has pointed out, but he has also shown that in other instances this course abounds in evils and even danger to the patient. Where, then, shall the line be drawn?

We may remove immediate cause of disease, or accomplish mechanical results by the use of medicines as well as by other means, but in doing so the physician should bear in mind two things. One is that the effect of medicines is not limited to the one desired. Whenever administered for the accomplishment of any one purpose, physicians should be prepared to encounter other more or less unpleasant symptoms which the drug is known to produce. We cannot say to any remedy, "Thus far shalt thou go and no farther." Once introduced into the system, its effect is beyond our control.

Another circumstance that should be kept in mind is the old Hahnemannic doctrine of the primary and secondary effect of drugs. Especially does it apply to stimulants and narcotics. It explains why some medicines produce at first the effect that may be, at the time, desirable, yet in the end leave the patient worse than before.

While I deprecate the habitual use of measures or medicines in any other way than in accordance with the law of similars, yet other expedients may be used, if with judgment and proper understanding. Even medicines may be used antipathically in a way that need not be antagonistic to the principles of Homœopathy, but rather as supplementary to the homœopathic remedies.

Homœopathy has, to a certain extent, ceased to be aggressive. I think this is in part the result of the changes that have taken place in the old-school methods and practice. In the earlier days of Homœopathy, attention was chiefly directed toward the enormous drugging

that was then in vogue. The eyes of the people as well as the medical profession were opened to the fact that drugs were poisons, and that medicines would produce dangerous and lasting effects. It brought about a rebellion on the part of the people against the large dosage that prevailed in those days, and compelled the old school to greatly modify their practice. The Homœopaths seem to rest content with this result.

Whatever of aggressiveness the Homœopathic School may take on hereafter must, therefore, be along a somewhat different line. It must be prepared to meet the changed conditions. The old school are now much more cautious in their administration of drugs. They have come to recognize the fact that serious results may follow the administration of large doses of medicine. They are more ready to recognize effects as produced by medicines than formerly.

The efforts of the Homœopaths must be directed toward educating the people as well as the profession to the fact that the difference lies in the principle upon which medicines are prescribed rather than in the quantity. If we expect to make any inroads in the ranks of the old school, it must be by demonstrating to them that Homœopathy offers a more stable system of therapeutics as well as a more successful system than anything that they possess.

CHARLES GATCHELL, M.D., Chicago, Ill.: It is very rash in me to undertake to discuss Dr. Mitchell's able paper on five minutes' notice, and it is only at the earnest request of Dr. Price that I have consented to do so. It is my belief that almost all antipathic methods are injurious methods; the writer of the paper made that point when he said that it requires a very judicial mind to know where to draw the line. That judicial mind should draw the line away up close to the point of safety—all on the other side is injurious. An instance of the antipathic method, as I understand it, consists in administering an astringent in cases where there is an excessive flow of fluids, as in diarrhœa. One speaker has said that there is no such thing as antipathy. With this statement I cannot agree. It is antipathic treatment to give opium for insomnia, to give astringents for a flux, and to give stimulants when there is depression. All stimulant treatment is antipathic treatment. But I do not understand as antipathy the giving of an emetic or cathartic for the purpose of discharging accumulations from the stomach or bowels; such method seems to me to be mechanical, entirely. The bowels may contain a foreign body; it may be anything, from a foreign body accidentally swallowed, or from any other cause, such as an over-accumulation of the natural bowel contents. It may be removed by an injection; but a cathartic given to move that accumulation is given for a mechanical purpose. If the stomach contains food which, in the then condition of the patient, does not agree, it acts as a foreign body; to remove it by emetic or cathartic is a mechanical act. In such condition, to rely upon the indicated remedy, based upon "symptoms," would be irrational practice. As to the mode of action of remedies referred to by the reader of the

paper, it seems to me that, as a result of the development of knowledge, it must be admitted that we are getting nearer the truth all the time. A near approach was madé in the expression of Bayes, quoted by the writer of the paper, and since put forth by Metchnikoff; it is simply another instance of a truth evolved by a Homœopath years ago, but not accepted until years later, when it is enunciated by a scientist of the old school, who now takes all the credit. Bayes's view was that the action of drugs is to arouse organic action, to act as a stimulant to the "life-force." At the present day the view of Metchnikoff is that the action of curative agents in the body is to exert a direct stimulating effect upon the nuclei of the cells, so rousing them to increased molecular activity and giving them increased force to combat disease-action, and thus bring about a cure. Our part with antipathy and the other methods of cure here enumerated is to work until that which is good in Homœopathy receives universal acceptance. When once so accepted, we may dispense with our distinctive name and character, and all physicians be merged into one great common body.

PEMBERTON DUDLEY, M.D., Philadelphia, Pa.: I am almost afraid to attempt to speak on this subject, because I find, since coming here, that I do not know what antipathy is. The name originated with Hahnemann, just as did the terms Homœopathy and Allopathy; it was his method of defining a certain conceivable relation between the drug and the disease—a conceivable therapeutic relation. He speaks of three relations and hints at a fourth. I do not like to attempt to quote without having the book to support me, but Hahnemann claims there is a homœopathic relation, an antipathic relation, an isopathic relation, and a so-called allopathic relation, which latter is not a relation at all, but an absence of relation. The homœo-pathic relation is the similarity of drug to disease; anti-pathic, the opposite; iso-pathic, the relation of the cause of the disease to its cure; and allo-pathic, the absence of any relation, which he said, was not worth considering at all. And that is why the allopath does not like it and prefers to be known by almost any other name. I hold and teach that it is rarely, indeed, that you can find the antipathic treatment of any disease. When you have to select a remedy from some relation between drug-action and disease manifestation, it is possible to suppose the existence of an opposite. But what is the opposite of pain? What is the opposite of a cough? What is the opposite of convulsions? of paralysis? of fever? You cannot imagine such a thing. You are met at the outset by the fact that the application of antipathy is, logically, an impossibility; Hahnemann himself directs our attention to this fact. Take the cases cited here this afternoon: in my humble opinion, no one of them is antipathic. A child has a fever, with evidence of irritation of stomach or bowels, so you give a cathartic; that is not antipathic; it is merely removing the exciting cause, which Hahnemann says we must always do. It is the proper thing to do, but there's no antipathy about it. Hahnemann says that when you have removed the exciting cause the disease will generally disappear of itself

without medicine. Keep in mind the difference between recovery and cure. Preparing the way for recovery is not cure; the rendering of a recovery possible is not a cure. Four things the doctor should know: (1) The properties of drugs; (2) the manifestations of curable disease; (3) the relationship between drug-action and that of disease; and (4) the removal of agencies in the way of curing the disease. If the allopath has a case showing high temperature, he gives an antipyretic; but is he giving an opposite? Is emprosthotonus the opposite of opisthotonus? Is a convergent squint the pathological opposite of a divergent squint? You see, the thing is not practicable. The illustrations cited during this discussion are allopathic, all of them.

George F. Laidlaw, M.D., New York City: The question, as formulated, is "Under what circumstances may the Homœopath resort to antipathy?" I should say, under what circumstances *must* he so resort, for I have maintained that there are circumstances where he must honestly resort to antipathy to cure his patient. Dr. Dudley says he knows of no examples of antipathic treatment. There is a large class of disorders known as strictures. I know of a gentleman suffering from severe abdominal pain, with occasional diarrhœa, who went to four or five good physicians and took their prescriptions, but without permanent relief; he went to an allopath, who gave him opium, but without good result. The introduction of a rubber bougie, followed by larger and larger sizes, cured him entirely; there was no more pain or distress. There was a certain condition, and by the introduction of the bougie you antagonized that condition and cured the patient. Everyone can parallel this case in his own experience. It is the same with spasmodic stricture of the urethra, which may be cured by dilatation with the steel sound. This is antipathic treatment, and we not only *may*, but *must*, resort to it. The error seems to me to date from the teaching in our colleges. I failed to get, from my homœopathic teachers, or to have pointed out to me, the difference between disease amenable to therapeutic treatment and that which needs mechanical treatment. The homœopathic remedy cannot discharge a large fecal impaction. If the muscles have passed the point where they fail to respond to our remedies, the patient will die if you do not help him. There would be no use in prescribing for the child with a cork in its trachea. Like the child which swallowed a hat-pin and then wakened up with pneumonia. You must use mechanical remedies for mechanical cases. We were not broadly enough trained by the Homœopaths who had us under their care. We are liable to fall under the suspicion that all Homœopaths are formed on the same narrow basis. I call spasmodic stricture a disease, because if you break it up the case is cured.

H. W. Pierson, M.D., Chicago, Ill.: I think that if Hahnemann teaches anything from the beginning to the end of the "Organon," it is that, before we attempt to cure disease, we must remove the exciting cause. This has nothing to do with antipathy or Homœopathy, and if we cannot draw the line between cases calling for

remedies and those which are purely mechanical, we had better go to school again.

J. C. WOOD, M.D., Cleveland, O.: It strikes me that some of us are carrying the philosophy of analogy too far in arguing that a convergent squint is the opposite of a divergent squint. I do not know where the next last speaker got his education, but if he will take a post-graduate course in the Cleveland College, we will teach him better. Yet the gentleman has my heartfelt sympathy, as I went through the same psychic process while wondering where I was at. The question is a broad one. I think we will all agree that the law of similia is the best one ever enunciated, or we should be inconsistent in remaining in this association. I am unable to find in this or any other homœopathic association one jot or tittle to keep me, as a physician, from using anything which is for the best interests of my patient. If I were restricted by this or any other organization, in any way, I should hand in my resignation at once. The question is, How are we to present this subject to our students in the best way? We should impress this fact upon them—we are, first of all, physicians. Hahnemann taught that our first duty is to remove the cause, when possible. The better posted we are in the homœopathic materia medica, the less often shall we have to resort to other expedients. But that there are certain mechanical or surgical lesions there can be no possible doubt, and we should impress upon the minds of our students the necessity of using mechanical and surgical measures in contending with them. There is nothing in Homœopathy proscribing this course.

J. S. MITCHELL, M.D.: The discussion does not satisfy me at all, because it settles nothing. Before the preparation of my paper, I read the Materia Medica discussions in the American Institute since 1876, in order to gain all the light possible. I find that they have been epitomized in the discussion of to-day, but nothing new has been added. It is simply impossible to get at the truth of such a matter. It largely depends upon just what is understood by each one concerning the subject under consideration. I do not find antipathy in the "Organon" as clearly set forth as it appears to be in the mind of Dr. Dudley. It is easy to get mechanical treatment confused with antipathy. I did not say that Hahnemann, in advising the removal of the cause, always advised antipathy. There are some things which come properly under the head of antipathy, such as the continued use of cathartics to overcome constipation, or opium to overcome diarrhœa. Strictly, its use is very limited. We shall never come to an agreement in regard to it, just what it is, and when we should use it, as long as we hold our present views of medicine.

Allopathy.

By William A. Geohegan, M.D., Cincinnati, O.

"He who, together with correct judgment respecting anything whatever, can find out its difference from all other things, will have arrived at the *knowledge* of that of which he before only formed a *judgment.*" (Ulato, Theætetus, Sec. 154.) The truth so clearly expressed in this aphorism of Plato actuated Hahnemann when, in announcing his new principle for ascertaining the curative power of drugs, he defined all other possible relations between the positive effects of drugs upon the healthy and morbid affections for which they could be prescribed according to a fixed method or law.

The classification which he adopted recognized the following relationships: 1st. *Antipathic,* that of direct antagonism or contrariety between drug effects and the manifestations of diseases; 2d. *Isopathic,* or that of identity of symptoms produced and organs affected; 3d. *Homœopathic,* or similarity of drug symptoms to those of the patient; 4th. *Allopathic,* or heteropathic, in reality the absence of any definite or uniform relationship between symptoms induced by drugs and those sought to be cured.

The evident purpose of this classification is the separate consideration of these possible relations as the foundation of therapeutic symptoms. Hahnemann recognized the fact that allopathic measures include the antipathic, and that absolute identity is impossible and the so-called isopathic relationships are in reality only similars. The relativity of these terms ought to be constantly borne in mind. Similarity does not imply correspondence in every particular. Difference does not exclude every point of likeness. Superficial resemblances may overlie deeper and radical differences. A trained eye may penetrate beyond apparent diversity and find essential unity. Errors resulting from superficial observation or incomplete knowledge may be vital and yet escape notice.

Therapeutic systems based upon the definite relations of antagonism, identity, or similarity, are correctly represented by the terms antipathy, isopathy, and Homœopathy. All applications of drugs not bearing any of these relationships to the morbid process, being of infinite variety and not based upon any fixed therapeutic principle, may be attributed to allopathy for purposes of contradistinction. The use of the adjective as applied to a school or system of medicine is of questionable propriety. A lack of system, an absence of the unity which is essential to the existence of a school, an arrogance which

denounces and excludes any therapeutic principle or law and brands it as a dogma in advance of a scientific test, and a self-sufficiency that exalts theory and speculation above natural law, seem to be characteristics of the dominant class of to-day. Therefore, let it be understood that by allopathy is not meant a system or science of therapeutics based upon any definite or exclusive principle, but that it is a term applied for lack of a better one to the use of drugs without any guiding principle of universal or even wide-spread application. The dominant class of physicians justly repudiate the term allopathic. The drugs chosen by their methods do not always bear the allopathic relationship; in fact, the use of similars abounds in their practice. This has been openly admitted, of recent years, by some of their leading authorities. Brunton avers that "the only difference between Homœopathic and rational practitioners lies in the fact that the latter regard the rule as only of partial application," and H. C. Wood, when speaking of Similia Similibus Curantur, claims that "for two thousand three hundred years this generalization has survived; it must possess some peculiar vitality, some measure of truth, and I myself believe that, as a rule of practice, it will at times lead to a good result." These admissions, however, are the result of a force of circumstances which could not be resisted, and there seems to be an unwritten law that no credit is ever to be given to Homœopathy for advancement under its guidance, nor mention made of a similarity between the effects of drugs and the conditions for which they are recommended. It must be borne in mind that while Similia is acknowledged to be a law of partial application, there is not in existence any evidence of an attempt upon the part of the dominant school to scientifically investigate the extent of its usefulness nor any recommendation to employ it as a guide to the selection of a remedy. If a similimum is attained it is always by other methods. Thus it may be seen that there has been no real advance upon the observations of Hippocrates, Galen, Paracelsus, Stahl, and others; Similia Similibus Curantur was to them, as it is to the so-called regular school of to-day, an empty and unmeaning formula. The thread of law running through the whole fabric of clinical experience, the similarity of the positive effects of drugs to the symptoms actually cured by them, was the vital discovery of Hahnemann, as it is the guiding principle of his followers. It involves the recognition of the totality of the symptoms or life-manifestations of disease, as the resultant of morbid influences or processes, and of personal idiosyncracies, giving to each case its own individuality. The application of drugs on the basis of similarity to the sum of all manifestations of disease in the patient, rather than upon any theoretical or speculative estimate of the existing pathological conditions, is a necessary corollary of the law.

Using the term allopathy as a designation for practices without the guidance of law, let us consider the scope of such procedures. To justly and dispassionately state beliefs and describe practices not in accord with one's own is always a difficult task, and, however impar-

tially performed, it is impossible to escape a charge of prejudice and partisanship. Therefore, it seems best to define the scope of the present principles of drug therapeutics in the words of an eminent English allopathic authority, Dr. John Leech: "We give drugs in disease for two purposes: 1. To restore health directly by removing the sum of the conditions which constitute disease. Here we act empirically, with no definite knowledge—often, indeed, with little idea of the action of our drugs, but on the ground that in our hands or in those of others they have restored health in like cases. 2. To influence one or more of the several tissues and organs which are in an abnormal state, so as to restore them to or toward the normal, with the hope that if we succeed in our purpose, recovery will take place. This purpose we effect by means of the influence which the chemical properties of drugs exert on the structure and functions of the several tissues and organs. Minute information, therefore, of the nature of the drugs and their action is essential for their proper application." Accepting the limitation of allopathic therapeutics to empirical applications and the so-called "rational" method, in forming an estimate of their value, we may invoke the aid of another of their authorities. H. C. Wood writes: "The primeval method of treating disease was that which we now know by the name of empiricism, a method that may be defined as the using of a certain remedy in a certain disease because it has seemed to do good in similar cases. From time to time, led by chance, by fanciful suggestions, by mental influences unrecognized by their subjects, men have given remedies innumerable and most diverse to persons suffering from disease, and when recovery has occurred it has been generally attributed to the remedy administered last. No substance so vile and disgusting, no procedure so violent and injurious, that it has not been empirically employed, while men have affirmed and reaffirmed its great value as a cure. It is true that careful observations repeated on many individuals may at last give a basis of practical truth and success to empirical treatment, but such method must remain, even after centuries of study, uncertain and unscientific." From this gloomy view of the "medicine of experience" we may turn to rational therapeutics," which, Lauder Brunton says, "consists in the administration of a drug because we know the pathological conditions occurring in disease, and know also that the pharmacological action of the drug is such as to render it probable that it will remove or counteract these conditions. Rational therapeutics is the highest branch of medicine. Its advance is necessarily slow, because it is based on pathology on one hand, and pharmacology on the other, and both of these depend upon physiology, which in turn rests upon physics and chemistry. It is only with the development of the fundamental sciences that those which rest upon them can grow, and when we consider that chemistry as a science is not much more than a hundred years old, and when we see the advances it has already made, we cannot but be hopeful for the future of therapeutics." But Wood and Brunton are enthusiastic advocates of the "rational" methods, and this cannot

be said of many modern authorities. Aulde insists that "too much dependence has been placed upon the deductions from laboratory investigations," and Leech gives it a secondary place, saying, "The chief point in which the modern method of selecting a drug differs from that formerly employed is that when empirical knowledge does not appear available, we employ methods of reasoning founded more directly on the pathology of the disease and on drug-action, instead of on metaphysical or fanciful theories as to the nature of diseases and remedies. Nevertheless, it must be pointed out that in the application of pharmacological knowledge we still use hypotheses; and upon the correctness of these our results must depend." Then he proceeds to show the untrustworthiness of clinical experience, admitting that "the cases in which experience founded on simple observation can be trusted in the selection of drugs are few. The same collocation of symptoms and conditions are rarely repeated, yet, unless they are, when we select a drug on the ground that it has before done good, we act on analogy rather than on actual experience." Can we wonder that such pessimistic views upon the part of the leaders of the dominant school has led to what Dr. George F. Shrady deplores as "too prevalent therapeutic nihilism"? Well may we pause to consider "under what circumstances may a homœopathic practitioner resort to allopathy?" An answer involves a consideration of what may be accomplished by Homœopathy in a given case, and what of its shortcomings, if any, can be supplied by allopathy.

Homœopathy is claimed to be the science of therapeutics. Its place as a principle is now conceded by the dominant school. The difference to be considered is regarding the universality of its application. Can one who believes it to be a law consistently resort to other methods?

Science implies many and definitely related conditions occurring in orderly sequence; but it is not merely an array or classification of facts; it is, rather, our conceptions or generalizations based upon facts; a co-ordination of phenomena evident to the senses and guiding or directing the advance agent of all progress—the imagination. Two of its requirements are the capacity for indefinite extension and the power to grant provision. We believe that the law of Similia Similibus Curantur fulfils both of these demands.

The application of any law involves the establishment of premises upon which to base it. Three important factors are to be considered in the practice of medicine in accordance with this law. First, a comprehension of disease in general, and as manifested in the individual in particular. Second, a knowledge of the positive effects of drugs upon the healthy. Third, an additional personal element supplied by the physician himself.

All attainable knowledge of disease is of the utmost importance to the practitioner of Homœopathy, being essential to prophylaxis, the removal of causes still present and operative, to the regulation of hygiene, the elucidation of symptoms, the proper limitation of the sphere within which the law of Similia is applicable, and the under-

standing of the modifications of the course of disease actually due to the drugs employed.

That a knowledge of drugs is essential is self-evident, and that it must be founded upon experimentation upon the healthy is demanded by the law. What must be known for the successful application of drugs homœopathically is yet an open question, and upon its solution depends the justification of a resort to allopathy. It is the duty of every true Homœopath to recognize the imperfections of our materia medica. It need not lead to discouragement or distrust if it falls far below the ideal, for with all of its faults it enables us to attain success far beyond that of the dominant school. The importance of thoroughness in the study of drug diseases has been generally recognized, but the amount and kind of experimentation required to give it a truly scientific value has been underestimated. Individualization is the corner-stone in the foundation of our system, but we have not followed it to a logical conclusion in our studies of drug-action. What a conglomerate picture would result if every symptom of twenty cases of pneumonia were recorded without regard to their association, and then arranged into a schema like that so often used in our materia medica! How much effort would be required for a beginner to make a diagnosis from this schema! A drug-symptom is a resultant of its pathogenetic power, and the environment, heredity, and the individuality of the prover, and may be of little or no value where no two of these factors are the same. The time has come when the mechanical fitting of a mass of indefinitely related drug-symptoms to those of a patient is to be regarded as a misconception of the true spirit of Homœopathy. A few years ago there was exhibited in Cincinnati a painting representing the Falls of Minnehaha, in which an attempt had been made to exactly delineate each leaf of every tree and shrub. What a monstrosity of art! Imagine, if you can, an artist studying every minute detail of the structure of leaf and tree, of stone and soil, analyzing water and air, and yet failing to secure a complete view from which he could sketch the outlines of the landscape and observe the relation of each part to the whole. Our materia medica has a scientific basis, yet its application is and must remain an art. The mechanical comparison of the symptoms of a patient with symptoms not clearly pathogenetic must often lead to the selection of a drug bearing an allopathic relationship, even if prescribed with homœopathic intent. These views are not presented as orthodox; they are only "my doxy," the result of conclusions that the proximate principles of our materia medica can only become a part of the homœopathic body by assimilation. The attempt to use every symptom following the administration of a drug is bewildering, engendering a hopelessness which has driven many to the use of allopathic measures and others to hesitate to engage in provings which would only add to the existing confusion. As before stated, drug experimentation has been considered too lightly. As individuals, by a lifetime of study, have left an indelible impress upon our knowledge of a given disease,

so men are now needed who will be content to make the study of one or two drugs a portion of their life-work. Every pharmacological fact, every symptom produced by a drug, should be welcomed and preserved, even if not available for present use. The study of the effects of drugs upon animals has been discouraged too often. While it can never furnish a basis for our materia medica, it will aid in the interpretation of symptoms developed by provings. Who does not feel more confident regarding the homœopathicity of Bryonia to pleurisy and pneumonia, knowing that it almost invariably causes inflammation of the pleura and lungs when given in lethal doses. We have a host of young men, skilled in laboratory methods, who would bring enthusiasm to this work if properly encouraged and impressed with the fact that conscientious investigation would be sure to win recognition and approval from their seniors.

A great need of the profession to-day is the development of the artistic instinct in the individual. Men must learn to study a drug from all possible views as the price of success. Many have an inherent capacity for perceiving analogies and similarities which will be the basis of their success as practitioners and teachers. What is possible to one man is impossible to another, and each must learn his own capacity. The conceptions of the individual may prove of service to the profession at large when presented with the facts upon which they are based or can be cited in their support. It is the implied or revealed conception of the prescriber that gives to clinical records their undoubted value, even though they may be, as Dr. J. P. Dake has said, "a source fruitful of all manner of empiricism and uncertainty." A careful analysis of the practice of our best physicians will reveal the fact that they have been unable to avoid all empiricism, nor is it possible for anyone to do so in the present state of our knowledge. In fact, well-founded empirical practice may have advantages over attempts to use the most scientific methods, if any of the premises upon which the latter are based are faulty in any particular. So, when the development of the basic sciences of our materia medica or our attainments as individuals do not enable us to reach the perfection of art, we must not permit our patients to suffer for lack of the use of remedies which have seemed to be of service in similar cases.

The illustrations of what might be justifiable for one individual in departing from a strict application of the law to-day, might not apply to the same person or to anyone else to-morrow. The true Homœopath is one who not only believes in "Similia Similibus Curantur," but practices it to the best of his ability, and at the same time recognizes the inherent limitations of its application and those arising from deficient development of the basic sciences; in his highest mission, the restoration of the sick to health, he must not overlook any measure that gives any promise of benefit to his patient, if his knowledge does not enable him to effect a cure by the law of similars. This is not disloyalty, and does not imply deception. Conscientious study will lessen the frequency of necessary departures from the law, and he who

fails to leave some advancement as a heritage to the profession has been recreant to an important part of his trust.

No attempt has been made to define the common ground which does not fall within the curative range of drugs, and hence is not peculiar to any school or system. Its boundaries are not definitely defined, and honest difference of opinion may arise. Liberality of thought and action regarding the relations of the methods of practice is compatible with unswerving loyalty to the law, and essential to the well-being of the patient. In conclusion, we may echo the sentiments attributed to Dr. Goullon, of Weimar: "If we now ask who can be called a pure Homœopath, I believe I might reply that he is one who applies Homœopathy according to the measures of the advance of his knowledge and to the greatest extent of his energies, and therefore develops and realizes it as his predominating therapeutic principle, even should he be forced, through the imperfection of human endeavors and circumstances which lie wholly beyond his control, to adopt, in exceptional cases of emergency, other modes of treatment. We would call him an impure Homœopath who uses the homœopathic remedies according to the principle of *contraria contrariis*, who prescribes them in combination with allopathic and antipathic drugs, who weakens and exhausts the vital principle by depletive and counter-irritant measures, and who treats the same disease, from sheer indifference or from the wish of the patients, now on this and now on that principle. Such is the measure according to which we must judge of the purity of the homœopathic physician, and let us not condemn him if he is obliged, now and then, to yield to the force of circumstances."

Discussion.

T. L. Hazard, M.D., Iowa City, Ia.: Physicians differ widely in their ability to readily make a homœopathic prescription. On the lack of this ability often depends the temptation to resort to allopathic expedients. Some physicians can almost by intuition select the similimum, but most of us are not blessed with that almost miraculous insight into human ills and drug affinities, which will allow us successfully to thus select our drugs. We must go about it in a more laborious way.

While many of us select our remedies semi-empirically, our empiricism differs from that of the old school in this respect: they usually consider a special disease, the ultimate division for which, a remedy is to be selected, while we choose for the case, that remedy, among those suitable for the disease in general, which in our hands, or in the hands of others, has acted favorably in similar conditions.

To select the similimum with the greatest possible certainty, I believe we should, as much as possible, keep the name of the drug in the background. This means more work and deeper study. We can afford to work, however; it is our privilege as well as our duty.

The allopaths have classified their system of practice into empirical and rational divisions. It is to be supposed as they call one part of their practice rational they consider the other part illogical. As to the rational part of their practice, it would be well for them to remember that "rational" is a comparative adjective, and "homœopathic" would be a good superlative.

The typical allopath is arrogant, prejudiced, and intolerant. He is the Spaniard of medicine. Though somewhat more civilized than he was one hundred years ago, he still tortures many of those who come within his power. After the fashion of the would-be subjugator of Cuba, he wins wonderful victories by aid of those powerful weapons, the pen and the typewriter. Time after time has he thus vanquished the hated Homœopaths. Valiant indeed are we to rise up and say we still live.

Unlike the sharpshooters of Homœopathy, he seldom hits the mark. When he does, however, with his shotgun prescription, the stretcher, the ambulance, and the hearse follow in his wake.

Inventive genius has labored long to perfect a smokeless powder, thus enabling the soldiers to see their enemy fall. The allopath analogously has advanced successively from opium to the white powder of morphine, antikamnia, phenacetin, salol, trional, etc., and, like the soldier, has seen with each advancement in his ammunition more and more of his victims fall.

He has heard of the ambition among men of war to invent a powder with which to load their cannon which will greatly accelerate the velocity of the charge. For a like reason he adds croton oil to his compound cathartic pills.

Who would be an allopath? Certainly, only he who is unacquainted with the virtues of Homœopathy would respond in the affirmative.

There may be those in the homœopathic school so immune they can go among the enemy, appropriate his arms, use them in their fight against disease, and escape almost unscathed, but a majority of us who have tried the dangerous feat have been poisoned by the pestilential air, and it has taken many a homœopathic prescription to restore us to health.

If there be virtue in vaccination, would that we might all be inoculated with Hippocratic virus and forever after be free from that virulent disease to which we are so frequently exposed, that decimator of mankind, that depopulator of the earth—allopathy. Perhaps that is rather strong, but if I could conjure up before us—and we were out on the prairie, where there is room—the countless men, women, and children who have been sent to untimely graves by venesection, morphine, calomel, quinine, acetanilid and its derivatives, and many other drugs unscientifically prescribed, words would fail to express our astonishment. It would be the most notable allopathic convention held in all time.

CARL J. LUYTIES, M.D., St. Louis, Mo.: I have listened with great interest to the paper and the discussion, and wish simply to say that

the manner of conducting provings has much to do with the confusion of symptoms. The plants may be collected at different times of the year, which may lead to obtaining different symptoms. Impurities in the drug may make it difficult to tell whether the proving is all from the drug or partially from the impurities. Each drug may differ in strength, when the plant is prepared in different ways, or differ in ingredients. The symptoms derived from a proving of a drug, the purity of which is known, would be more valuable than that of many of doubtful purity or strength. The length of time they lie in the shop before being made into tinctures would also be a material factor.

George Royal, M.D., Des Moines, Ia.: I have but a few words to say. In the first place, there is no such thing as isopathy, therefore I can have but little to say, and that will be on that line. Our chairman has divided the subject into two parts, and put the first part in the form of a question. The first question, I think, has to do with its origin and meaning. As to its origin, Hahnemann speaks of it in his "Organon," and he distinctly states it is not Homœopathy, and he also gives us the impression that it is nothing akin to Homœopathy, and nothing that we should look to or expect a great deal from. In regard to its meaning little need be said. In regard to its application, we have wandered so far away from the real meaning of the word that a little explanation may be necessary. A good illustration of isopathy would be in our remedy Psorina. When we consider the properties from which our remedy Psorina is made, we can see at once, what I have already stated, that there is no such thing as isopathy. We have, as it exists, the serum of the vesicle of scabies and the trituration of the dry scale of psoriasis; both are called Psorinum, but they certainly could not be used as the same remedy. You can see at a glance that it is all fallacy. There is a school established by those who hold to this theory for the purpose of teaching this system of medicine. They have carried the matter farther, taking, as they say, the poisons that produce certain diseases and using them as medicine, calling that isopathy; taking the poison of small-pox, the poison of syphilis, and of gonorrhea, and using it as medicine. And then, also, more recently, we have organopathy, which is on the same order as serum therapy, which is now being discussed below, and which has no more place in our school of medicine than organo-therapy. Those who established this school can claim but little. My objection, looking at it from a scientific stand-point, is that we have nothing we can rely upon, because these substances have never been proven. I will admit that every now and then we see in our journals certain results brought about by the use of poisons that produce disease, but, like a great many other things, I think they need verification; they are not scientific. Another thing I want to protest against, and that is that a great many of our homœopathic people have been led astray by the belief that isopathy and Homœopathy are the same thing. In other words, it is one of the barnacles that has been permitted to attach itself

to our school of medicine in order to be lifted up. In just these few words I object to the word "isopathy," from a scientific stand-point, and say there is no such thing. I also want to protest against those who are avowedly following Homœopathy, and at the same time claiming that Homœopathy and isopathy are one.

W. E. LEONARD, M.D., Minneapolis, Minn.: At first thought it seems unfair that this portion of the section is not represented by a paper on isopathy corresponding to those that were read on the subjects of antipathy and allopathy; and yet it is not wholly a misfortune, because, as Professor Royal has said, the subject does not deserve it. I believe, with him, there is no such thing as isopathy, and there is abundant reason for thinking so. Take, for instance, the preparation known as Lyssin, the poison of the mad dog. In Hering's "Guiding Symptoms" there is page after page describing the condition said to be produced by this poison. I firmly believe that those serums are all unreliable in their composition. They are not only uncertain, but they are very disgusting, as, for instance, the use of syphilinum, the poison of syphilis, and vaccinum, the poison of small-pox. I see no advantages in these medicines, and I have experimented somewhat with them. It would not do to give them to anyone merely to see the effect. I would not want to poison a patient with syphilinum merely as an experiment. As Professor Royal has said, these preparations are uncertain in their origin, and are never the same. Syphilinum taken from one patient having syphilis is not the same syphilinum that might be taken from another patient and prepared next year by the pharmacist and called syphilinum; therefore, there is an uncertainty about the product as well as an uncertainty of action. I conclude that the whole matter is not practical.

H. W. PIERSON, M.D., Chicago, Ill.: I do not know that I have any particular remarks to make on Dr. Royal's presentation of this subject. I also do not know whether it would be a profitable subject for discussion were it not for the fact that the question is being reviewed from many different stand-points. To-day the question of isopathy is practically being considered in the room below with reference to the use of antitoxin. The objection is made that this is not a clear application of the law of similars; that is the question that is being discussed. I think we may discuss that same proposition here in its generic sense. From a scientific stand-point, is there such a thing as isopathy? Hahnemann very positively says there is not. Those who went before Hahnemann, those who paved the way for his declaration of the law, were liberal; they did not seem to grasp the matter as Hahnemann has done, simply because of their failure to see it, and when he spoke with such great emphasis against the principle of isopathy, it was more as a precautionary measure than that of anything else. If it be true that we have a law of cure, if it be true that the motto "Similia Similibus Curantur" be a true guide in the selection

of a remedy that will heal the sick, why put anything contrary to it? If there be a true application of a principle, if it be true that the remedies will produce a cure, it must follow as a logical sequence that it is a cure simply because it is an application of this same underlying principle; and, if that be the case, we have no such thing as isopathy. Homœopathy, the law of similars, is simply the sequence of that which has gone before and answers its purpose. Taking a step higher, if you please, this is just the position that the Homœopathic school to-day should take with reference to this matter. Now, Hahnemann says the only way we can know whether the remedy be operative or not is to determine its action upon those who are not sick, and whenever you take any product, it matters not what it be, you are to determine its use by knowing what it can do. Now, there may be some possible excuse for the employment of nosodes, simply because we have not a positive, definite, well-defined scientific knowledge of their scope and adaptability. We reason that here is the condition of a man who is sick. The man is sick in a certain way; another man is presented to your consideration who is sick in a similar way, and you study the pathological tendency of this sickness. You have given no name to it at this time. After a certain number of these cases are presented to you, you determine what it is; you may say it is psoriasis, you may give it the name of syphilis, the name of gonorrhea—it makes no difference what the name may be that is given to it, provided you know the picture made by this disturbance. When you have the same knowledge of any remedy, whether it be the product of the diseased organism, or whether it be of any other nature, you have the logical, scientific agent to bear upon that diseased condition. The question of dynamization does not come in under this scope, but here seems to be the point from which Hahnemann departs with reference to the use of this isopathy, and it seems to be the point considered to-day by those who are advocating isopathic remedies in the treatment of the sick; they say we must reduce the power or potence until it has reached a point where danger does not lie in its application. This is a question we ought to discuss, we ought to clearly understand, in order that we stand right in our position as homœopathic physicians.

Homœopathy: Its Origin, Meaning, and Scope.

By Pemberton Dudley, M.D., Philadelphia, Pa.

The combination of Greek words used by Hahnemann to designate his newly discovered method in therapeutics is translated by the lexicographers as signifying "likeness of condition, feeling, or suffering." Dr. Dudgeon tells us that in its adjective form it is found in two places in the New Testament, in both of which it is rendered "like passions." Hahnemann defined it as the treatment of disease by a drug possessed of the power to produce, in the healthy, symptoms similar to those of the case to be treated. Possibly a strict regard for literary accuracy may suggest that the definition should express the idea of similar *diseases* rather than of similar symptoms. I am not sure but that Hahnemann's explanation of the *modus operandi* of the homœopathic remedy suggests the former idea more strongly than the latter; but the mode in which he applied his doctrine certainly forbids any other interpretation than the one proposed by him and accepted by all his disciples.

To assert that the simple formula "Similia Similibus Curentur" embraces the whole that is to be learned of the philosophy of Homœopathy, or implies all that is essential to its proper application, would be much like asserting that the dogma of the atonement includes the whole body of Christian doctrine. Once admit the *general* truth implied in the injunction "Similia Similibus Curentur," or expressed by the dogma "Similia Similibus Curantur," if you please, and we are immediately confronted by a whole series of problems which must be correctly answered before an uniformly wise and skilful employment of the new mode of therapeutics is possible. These problems do not relate merely to the topics collateral to Homœopathy—drug-proving, attenuation, the chronic miasms, and the rest—they concern the great central doctrine of similars itself.

As a preliminary to this discussion, let us admit that Hahnemann wrote "Curentur," and not "Curantur." What matters it? If the injunction "Let likes be treated by likes" means anything, it means that likes are curable by likes; otherwise the injunction would be absurd. It also means that this mode is either the best or the only method that can be employed successfully. For this reason I purpose to base this paper on the assumption that there exists in nature a law of cure, and that said law is properly—even though inadequately—expressed by the formula, "Similars are cured by similars."

If we are considering a natural law, and not a mere mental conception, we shall be compelled to recognize in our formula three dis-

tinct factors, each of which suggests questions that will not down at our human bidding. These factors are: First, the agent by which the cure is accomplished; second, the object upon which the curative action is exerted; and third, the cure that is to be consummated. What is Nature's curative agent? What is Nature's curable condition? What is Nature's curative process. No human intelligence can answer these questions except by first interrogating Nature herself. Their consideration would require a volume, rather than a brief essay, and I can therefore attempt their presentation only in the merest outline.

A. WHAT IS NATURE'S CURATIVE AGENT?—Is it any substance, or any natural force, or any influence, having the power to evoke symptoms? If so, does this natural law restrict the *method* of evoking symptoms to some one particular way? or does it embrace all possible methods of accomplishing this result? We know that all the imponderable and immaterial forces—heat, light, electricity, etc., and many other influences—fear, joy, anger, etc., have been known to manifest symptom-producing properties. Do they also exert curative energy when indicated under the Hahnemann method? Again, the substances known as "drugs" exert symptom-producing power in at least four different ways, namely, by their mechanical, physical, chemical, and (so-called) dynamic properties. Are all these properties concerned in cures effected under the therapeutic law of similars, or is only one of them? and, if the latter, then which one? Among the more careful thinkers of our profession the opinion prevails that the law of similars can be applied only by means of drugs, and only by means of their pharmaco-dynamic properties. I shall not offer any argument for or against this view, but would respectfully submit that conclusive demonstration of either the truth or falsity of the proposition remains yet to be made.

A second problem that presents itself in reference to the curative *agent* is: What importance does Nature attach to the physiological method by which its pathogenetic symptoms are produced? To illustrate: the symptom, "increase of glandular action," may be brought about in at least three ways, namely, by stimulating its nerves, by dilating its vessels, and by augmenting the vital energy of its parenchyma—its own living substance. Each of these modes may be represented in our provings by a different drug. Does it make no difference which of them we select from the symptom? And if a proper discrimination be essential, then how can the discrimination be intelligently made unless the provings designate both the symptom and its physiological relations?

The writer believes it will yet appear that many of our most philosophical prescribers are to-day working largely on this basis, though under supreme difficulties, and are rapidly abandoning the opinion that the practice of Homœopathy is a mere game of medical dominoes—a mere mechanical matching of symptoms with symptoms.

Still another problem under this head has reference to the primary and secondary action of the curative agent. I very seriously regret

our common misuse of these two terms, by which they have been employed to designate the direct action and counter-action of the drug. Properly speaking, the "primary action" of a drug is that which it exerts directly upon the part to which it holds specific affinity. Its "secondary action" is that which is induced by the disturbance which results from the primary action, and not from the drug. To illustrate, a drug may exert a specific action on the alimentary tract and on no other part. But the violence or persistence of the alimentary disorder, thus induced, may bring about disorder, with symptoms, in the nervous and vascular systems and with other parts with which the suffering alimentary organs are in close physiological relation. We ought to adopt the nomenclature of the pathologist, and designate the first of these disorders "primary" and the other "secondary"; remembering at the same time that each of these two disorders may present both direct and counter symptoms. Now suppose a patient to present himself with the symptoms contained in the above-mentioned secondary group, and with no present or past record of any symptoms of the primary group; does any intelligent Homœopathist imagine for a moment that the drug capable of causing these symptoms in this roundabout way could homœopathically cure them? The whole conception is absurd. There has been much discussion of the relative value of the direct and counter symptoms of our provings, but it is of far greater importance whether, in our provings, these truly and really secondary symptoms shall be retained or excluded.

Finally, under this head, it has already been said that, according to the general view, the homœopathic agent accomplishes its curative function only through that property which Hahnemann denominated its "dynamis"; in other words, its power to modify the functions—that, and that only.

But what sort of functions? The term is used to designate several classes of phenomena essentially unlike each other; and these different classes of functions are by no means well defined in the medical mind. We study physiology too much as naturalists and too little as therapeutists. We classify the functions as "animal" and "vegetative"—a classification of very little use to the physician. If we should arrange them under the heads of "mechanical," "physical," "chemical," and "vital," how much easier it would be to learn the principles and methods of adapting treatment to disease and injuries! Or, suppose we should classify them as, first, those by which the organism holds relationship with its environment—Functions of External Relation; second, those by which each part or organ contributes to the welfare of other parts or organs, or to that of the body as a whole—Functions of Organic Relation; third, those by which each part maintains its own anatomical and physiological perfection—Functions of Autonomism, or, if you prefer, Metabolism, though I do not believe that metabolism designates the whole of those independent activities which occur in each ultimate anatomical element.

It would, in the opinion of the writer, be easy to show that the

homœopathic agent does not act upon those functions which are properly termed mechanical, physical, or chemical, but only upon those known as vital. Or, taking our second mode of classification, it can be demonstrated that the similar remedy acts only upon the autonomic functions—the independent vital activities of the human body. Hahnemann must have had this conception when he prepared his masterly description of the functions, affections, and relations of the vital force. But let us not misunderstand ourselves. There can be no doubt that the homœopathic agent, through its power to affect the vital or autonomic functions, may also, and does, bring about restorative changes in the others. Just as the pathogenetic action of a drug may be primary and secondary, so also may its restorative action be.

In this limited paper there is small chance for argument; but one thought should be presented in support of the view that the homœopathic agent acts only upon the activities of the organism, and not upon its anatomical arrangement or its chemical composition. It has been argued that a change in the internal activity of a part—a protoplasmic molecule, for instance—is not conceivable except in connection with a change in its structure. Yet it is well known that such immaterial agents as heat, light, joy, anger, or fear can and do affect these activities, and it is absolutely inconceivable that these agencies can, under any circumstances, produce modifications of the living molecule except through its internal activities. Moreover, it is a fact of peculiar interest to the Homœopathist that many efficient curative agents are such as could not possibly enter into the composition of normal protoplasm—such, for instance, as arsenic, mercury, etc.—yet have power to change disease to health. We may conceive the possibility that these substances might form some sort of chemical or physical combination with the protoplasmic molecule, but that such an abnormal and monstrous combination could cause and constitute a restoration of the normality (health) of the molecule is utterly outside the realm of intelligent belief. The whole view of molecular science, as held nowadays, favors the theory that homœopathic action is exerted solely upon function—only upon vital function, and only upon disordered vital function. But I anticipate.

B. What is Nature's Curable Condition?—From what has been already said, it follows that the curable conditions which the homœopathic remedy is capable of affecting, are those which depend for their causation or continuance upon disorder of the vital activities, and that disorders otherwise maintained must be treated otherwise. Observation of the results of practice in the homœopathic profession will convince us that nearly all the cases requiring surgical treatment, and nearly all the essentially incurable cases, come under the latter class.

It is so easy for one writing on this subject to be misunderstood that we should here call attention to that large proportion of cases whose symptoms spring out of a combination of maintaining causes,

mechanical, physical, chemical, and vital, or out of a union of two or three of them. It is also a matter of frequent occurrence that a disorder of the vital activity is secondary to some non-vital condition or cause. We can readily perceive the difficulty of curing such cases with the unaided homœopathic remedy; but, even here, we can accomplish much by the restraining and corrective tendency—if you will permit the expression—of the accurately chosen medicament. Thus Homœopathy supplies our safest, perhaps our most reliable, means of palliative treatment.

If it be true that many conditions of vital disorder are caused and maintained by incurable non-vital agencies, it is likewise true that many conditions of apparently mechanical or physical disease are caused and perpetuated by vital disorders that are altogether amenable to the curative potency of the homœopathic remedy. It is a huge mistake to suppose that all mechanical and physical diseases—as they are called—require mechanical or physical treatment. Many of them are curable by the homœopathic drug, difficult though its selection may be. Give us such a materia medica as Hahnemann contemplated when he wrote Sections 106 and 144 of the "Organon"—a materia medica composed of drugs whose entire pathogenetic range and power are known, and from whose recorded symptomatology every mere conjecture, every mere supposition, and every mere assertion has been rigidly excluded, and with such a materia medica give us a full understanding of the philosophy of the law of healing, and we shall soon see the narrowing of the domain of surgery and witness an increased confidence in the power and efficacy of the similimum.

C. WHAT IS NATURE'S CURATIVE PROCESS?—In other words, what is that particular change which takes place under the force of the similar drug? Until we answer this question we shall not know exactly what the law of cure means. Judging from the literature of medicine, to cure means to cut and slash and tear and tie and crush and sew tissues, to correct displacements, to imprison a wayward bone or a wandering uterus, to chop off a diseased or injured limb, to murder a parasite, to set up and run a chemical laboratory in a man's stomach, to whip up a pair of good, reliable kidneys until they become well-nigh useless from overwork, to lash the intestines, to goad the liver, to prod the skin, to paralyze the nerves and narcotize the brain, and to do a score of things utterly unlike each other, to a patient whose vital energies are such as to enable him to get away with his life. When men use the term "cure" they mean all these things. But when Nature declares that she cures similar diseases with similar drugs, what does *she* mean? What is a homœopathic cure?

The scientific way to reach a reply to this question is by observing the homœopathic cure and seeing what it is like and what are its phenomena. And we first observe that it is usually accomplished with a quantity of medicine so small as to exclude the supposition that its action can be mechanical, physical, or chemical. Second, we note that when administered in proper quantities, the drug produces no

symptoms of its own; showing that it does not cure disease by causing disease, and that it does not restore health to one part by making another part sick. It demonstrates that the action of the drug is exerted only upon the part and function disordered and upon no other part, and that its action is only corrective and not pathogenetic. These phenomena, when carefully interpreted, also indicate that the curative action of the drug is always direct, never secondary.

We may sum up the points of this paper as follows:

1. The homœopathic drug acts alone by its "dynamic" properties.
2. Its action is exerted only upon vital activities.
3. It cures by changing abnormal into normal activity.
4. It may bring about changes in functions not properly considered vital; but it does this only indirectly.
5. The homœopathic action of a drug never produces functional disorder.
6. The domain or scope of Homœopathy includes all groups of symptoms springing from disordered vital activities.
7. Its domain also embraces the amelioration of such groups of symptoms, even when their underlying vital disorder is caused and maintained by incurable, non-vital conditions.
8. Its curative domain does not include symptom groups, caused and maintained *directly* by mechanical, physical, or chemical derangements of the organism, except when said derangements are themselves maintained by disorder of the vital actions.

Mr. Chairman: This essay seems to its author like a very little attempt to accomplish a very immense task. As to the question: "When may the homœopathic practitioner resort to unhomœopathic methods of prescribing?" I think the above statement of the scope of homœopathic influence is a sufficient answer. Aside from such a consideration, it will depend upon the breadth and intensity of his belief in the superiority of the homœopathic over other methods, upon his intelligence, and upon his conscientiousness. I cannot be the judge of other men's conduct, neither can I undertake to make a peace between my professional brother and his conscience. I have troubles of my own.

J. L. HANCHETT, M.D., Sioux City, Ia.: I never like to make an excuse, but I have a good excuse this time. I only saw Dr. Dudley's paper a short time ago, but I read it with a great deal of interest. To me it is the greatest subject in the world. It is a subject that has interested me more than any other, the philosophy of Homœopathy, and as I said yesterday, I never read a book as I did the "Organon," I read it and reread it. I did not say that because I have a feeling of reverence for our principle and Hahnemann, but because I feel that he was a scientist far ahead in the practice of medicine. Until a few hundred years ago everybody thought the earth was flat. How can it be possible that we are taking Hahnemann's ideas to-day because he was a discoverer of a principle? How can it be possible that we try

to keep the letter of Hahnemann's teachings? I cannot understand it. A learned profession keeping the traditions of Hahnemann because he was Hahnemann. I never could understand it. There is, of course, a scientific philosophy if we could get at it. I believe with Dr. Dudley's paper in general that the scope of the homœopathic principle of curing disease is the greatest, but not the only. The question of immunity is still beyond our ken; we know nothing of immunity, why some people are immune from disease we do not know. Neither a microscopic nor a chemical test will give us knowledge of the immunity. I believe the principle of similars is a law of nature, is a natural law, a great natural law. I believe cordially in the sentiment of "similia similibus curantur," but as a learned profession we want to dig deep into the science and on a scientific basis. I believe it is all right and proper for us to doubt that the homœopathic law is the only law of cure. It seems to me that in taking up and holding the law and its corollary and all its principles, intact and complete, is a great mistake. Let us respect the law of similars and the great law of cure, and also let us be careful, let us not trust too far. When I think of all the barnacles, as Dr. Royal said, sticking to us, organotherapy, calorotherapy, etc., it is no wonder that we should doubt. It is simply my desire that we should be more and more scientific. I think Dr. Dudley's paper was an excellent exposition of Homœopathy, and I hope we may be able to go into a wider field of research than we have done in the past.

Wilson A. Smith, M.D., Chicago, Ill.: I would be very glad to say something on this subject if I could interest the members of the American Institute of Homœopathy, but I once had a talk with Professor Mitchell concerning this, and feel about as he felt when he told me that he had earnestly studied this part of the subject ever since he had taken it up; had read every article bearing upon it, as well as the discussions, which had been presented to the American Institute since 1876, and he also added, "I tell you frankly, Smith, I knew little when I commenced, I knew still less when I got through reading, and when I finished perusing the discussions in former sessions I knew still less." (Laughter.) There is no question about my loyalty to Homœopathy, there is no question about it being the scientific basis of therapeutics, and if a cure is made by medicine, whether accomplished with large or small doses, it is due to the fact that the drug has been employed homœopathically. We may be able to disguise disease with antipathic treatment, the same as we do pain with narcotics, but we never cure until we eliminate with homœopathic remedies the constitutional conditions which exist to permit disease to attack the system. In other words, Mr. Chairman (I do not know that I state clearly the point I wish to make), it is this: Remedies prescribed homœopathically for a sick man will make him well. A well man is one who can be exposed to any kind of contagious disease and not suffer from an attack, and yet if he is in condition to take it, and does,

only remedies prescribed according to the law of similia will cure him. Hence, I am not much of a believer in the antipathic treatment of disease.

DR. DUDLEY: Allow me to say that this whole question turns upon what we mean when we speak of "a homœopathic cure." What is the homœopathic cure? "Cure," in its literal sense, means simply taking *care* of a patient, whether he gets well or not. We can cure a patient until he dies, but that is not what we mean when we talk about a cure. I contend that the action of the drug may be in either of two directions; it may either force a function away from the normal, or back toward the normal. Whenever the drug is forcing the action away from the normal, it is producing symptoms; and conversely, whenever it is producing or aggravating symptoms, it is acting pathogenetically, and not curatively.

H. W. PIERSON, M.D., Chicago, Ill.: The discussion on this paper covers a wide range of thought, but in that wide range of thought may be presented one or two statements that possibly in their simplicity will clear up many of the difficulties we have to contend with. First, with reference to this primary and secondary action of drugs. The action should be primary in every case, there should be no other, no secondary action, unless the principles employed have been too great, or have been so great as to call for opposition on the part of the vital forces of the individual, and there can be no other question, if this statement be true, that the symptoms produced by the action of any agent, remedial or what not, must be in its primary nature. Now, we have people made sick because there is so much force employed as to go way beyond the point necessary in producing this sickness. You say it is evidence of its action. The fact is that the disease begins at the very instant in which there is disturbance in the relationship between the vital force and the organism over which it has control. Now this force becomes a disease-producing force, whether it be very weak in character, or whether it be strong, it is sufficiently powerful to produce a characteristic effect. Following this comes the statement that any agent to be employed that will be curative in its action, that is, simply bring this vital force back to its normal equilibrium, is all that is necessary, and it would seem to be a logical sequence of this statement that if you have selected a remedy that is directly and purely homœopathic, that is, directly and purely similar in character to that of the disturbant or disturbing agent, that it will take less to cure or restore harmony, simply because it fits perfectly into the case. We have an illustration of the first effect in the evils brought about by the disturbance from grief or joy, something that cannot be measured, something that cannot be determined in any way, only by the effects produced.

Now with reference to the question of immunity, a perfectly healthy individual, using the term in its generally accepted sense, is

one who is subject to every disturbing influence, but who holds his equilibrium because of the amount of reserve force that resists this disturbing influence. We seek with our remedies, not only to bring back to its normal equilibrium, to remove the effect of the disturbance, but to go deeper into the case and find out the *susceptibility*, the points of least resistance, of the individual, the temperament and the environment, and seek to remedy that, and I was going to say, you get immunity by the removal of the abnormal susceptibility, and when you have accomplished this you will have done something that will bring this vital force back to its normal state with very little assistance outside the force of nature.

E. B. Hooker, M.D., Hartford, Conn.: As the papers presented at this Institute, and the discussions of the same, depend, for their value, very largely upon their being an honest expression of practice and belief, and not upon a fine display of Homœopathy or loyalty thereto, I shall make a few remarks which may be exceedingly unpopular, and may fail to win your approval. But I shall speak to you as an absolutely honest man, and shall, from my experience, tell you what is my belief. Whether you differ or not, it will still be more valuable than anything which would glorify Homœopathy, if it did not present the absolute and honest conviction of the one who presented it. I do not offer criticism, or suggest any lack of truth on the part of any who have spoken. I believe in the great value of the homœopathic principle and in the occasional usefulness of what may be called allopathy. I am occasionally confronted by conditions which I cannot meet in their entirety by an exhibition of the homœopathic remedy. There are cases where there is great pain, which I wish to suppress if I can. If possible I should prefer to do this by the remedy which covers the totality of the symptoms. In this I may fail, for I confess to you that for me the indicated remedy will not always relieve pain. It may be in typhoid that the patient cannot sleep, yet sleep may be absolutely necessary; it may be that I cannot always give it to him with the indicated remedy, and I claim that it is not wholly my fault. It is very nice to say that in these cases the fault lies not with Homœopathy, but with the prescriber. That may be true to a certain extent, but I have to give a remedy which will exert a physiological effect for the time being. I do not believe that such will cure as the homœopathic remedy cures. This should be done as infrequently as possible; as the author has said, it is occasionally necessary to resort to practice which is not homœopathic. I believe that this is to be true, and that we do not cease to be homœopathic physicians because we sometimes do this. I believe that part of the insincerity with which we are charged lies in the fact that we claim to be Homœopaths and nothing else, yet we do use other measures. I believe that it is honest to claim for our method a very large place, but to admit that there are circumstances under which we may use other methods. I do not find the members of the self-styled "regular" school always to be

enemies. I believe that this enmity is passing away, particularly among the younger members, who recognize that we are educated men, trying, with them, to relieve suffering humanity.

J. L. HANCHETT, M.D., Sioux City, Ia.: I did not hear all of the paper, but I heartily approve of what I did hear. I am willing to confess and acknowledge that I do sometimes use means other than homœopathic, and, as the last speaker has said, I see no reason why we should not say what we are doing. We should do the best we can. Ninety-nine per cent. of my prescriptions are homœopathic to the best of my ability, but I do not hesitate to give my patients rest or sleep by physiological means. I use acetanilid on myself and on my patients for headache, and have never seen any bad result from five-grain doses. But I do not like to use these means on real sick people. In typhoid, in pneumonia, or other severe sickness, I hesitate more and more about using physiological methods, but in incidental pain, or where the body is not reduced, I do not hesitate so much to use other methods to relieve the patient. I see no reason why I should not acknowledge it. I have been considering this subject for the last seven or eight years, and have been writing a thesis upon it, which I have not completed; I hope for more evidence and more enthusiasm like what we have had to-day—it has been as a stimulant to me. I admire Homœopathy above all methods of cure; as Mark Twain says, "nothing has ever done so much for the world as Homœopathy." I prescribe acetanilid, not with any idea of making a homœopathic cure, but simply because it relieves the pains.

J. C. FAHNESTOCK, M.D., Piqua, O.: I shall never forget Dr. Lilienthal, who had a great experience in both allopathic and homœopathic treatment, and who always said that the closer he adhered to the homœopathic treatment the better he was satisfied, and his patients received more benefit from it than from any other form of treatment. I am of the opinion that the homœopathic law is right. You cannot make a right of a wrong, so there can be no compromise. Similia will cure more pain than any anodyne, and more promptly. Similia is a greater law than many of us realize. We are apt to think that similia has only to do with the administration of drugs, but it has a broader and wider scope. We use mental therapeutics the same as drugs in the line of similia, and much may be accomplished with it. The same with electricity and massage. I am glad to know the older I grow, that the closer I stay to the single indicated remedy, the more and better results I obtain.

A. P. HANCHETT, M.D., Council Bluffs, Ia.: I had not thought of saying anything upon this subject, as it has been discussed and rediscussed until the ground has been thoroughly covered. I agree with the last speaker in saying that the longer and closer I study the question, the more I am inclined to use the carefully selected remedy in all cases where there is a possibility of a curative result. There is a

time, however, when we have passed beyond the possibility of hope in malignant disease, where there is much pain, and in these cases the physiological action of the drug must be sought. There may be some—and I wish I were one of them—who can relieve with the indicated remedy, the dreadful pain of the last stages of cancer. The humane thing here is to relieve the agonizing pain, where every moment is one of dread. I have yielded to this feeling and, having failed in other ways, have resorted to such means to secure relief. I see no reason why we should not admit that we do sometimes meet with such failures. When we hear doctors say they never use anything but the indicated remedy, while we know that they do use other methods, their testimony is practically destroyed. Let us be frank. Let us be truthful.

H. S. MINER, M.D., Fort Dodge, Ia.: I wish to reply briefly to some of the remarks of Dr. Hazard. I can endorse most of what he said, but the charges he made against the allopaths are no more just and fair than the one which they made against our school which was quoted by Dr. Mitchell in his paper. That has not been my experience, and I believe that in many cases we are benefited by associating with them. I want to relate one case, and should like someone to tell me if the prescription made by the allopath worked homœopathically. It was a case of typhoid at the fourth week, without any relief or symptoms of convalescence. She was growing worse, and getting no rest under homœopathic remedies. Passiflora gave some sleep, but it was not satisfactory. She was troubled with acute abdominal pain, coming every fifteen to thirty minutes for thirty-six hours, and with every third or fourth attack there would be a free mucous discharge from the bowel, slightly tinged with blood. The patient was weak and becoming much prostrated; temperature rising. Up to this time the evacuations had been nearly normal. The family became alarmed and asked me to counsel with an allopathic physician, a good friend of theirs and one who had treated them occasionally. He came in, looked over the case, recommended a cathartic and mentioned the dosage. After learning that the case, up to this time had not been constipated, but had nearly a normal discharge, he changed his prescription, saying that the cathartic would not be needed, but that the patient needed rest, and he knew of nothing but morphine which would give it. Temperature now 101.5° F., pulse 115 to 120. I asked him in what form and amount he would prescribe it; he advised one-sixteenth of one grain, morphia et atropia, repeated every two hours through the night. I consented, but continued the homœopathic remedy, which was, at this time, Rhus. The patient enjoyed a good night and received only two doses of morphine, making one-eighth of a grain in all. Convalescence was established, and the case went on to a perfect recovery.

DR. GEOHEGAN: I shall have very little to say in closing the paper. I like the plea made by Dr. Hanchett—above all things, let us be true

to ourselves. Let us claim nothing for Homœopathy which cannot be substantiated. Was Dr. Hanchett's prescription homœopathic to a headache? What remedy is not? But was it homœopathic to that particular case? Probably not. This honesty is absolutely essential to progress; we must know not only what is homœopathic to *a* headache, but to *the* headache, or the prescriptions you have made have not been homœopathic. I remember that, at the last session of this Institute, when the subject of typhoid fever was up for discussion, one speaker said it was useless to give the therapeutics of typhoid, because there is no remedy in the materia medica which might not be indicated. What a misconception of Homœopathy! Could there be such a case of typhoid which would correspond with the totality of any or all of our remedies? This is not Homœopathy, and the practitioners, on such a basis, are the worst enemies of our cause—brand them allopaths, for such they are. I do not believe that we need many remedies for pneumonia; I am not afraid of the name. The moment you say pneumonia, there are a certain group of symptoms necessary. They lead you to a certain group of remedies from which you must choose, and a remedy which does not produce a fair amount of those symptoms cannot be indicated in that disease. As to the use of morphine, there are many times when it is justified; perhaps you may be able to get along without it, but I cannot. It cannot cure the case, but it will relieve that which I, with my limited knowledge, cannot relieve with the potentized remedy. I am honest enough to confess this ignorance, and too honest to withhold the morphine.

The CHAIRMAN: There is one thing that has been shown most forcibly during these two sessions, and that is the fact that we need to study the question of the "pathies." While I agree in the main with the belief that Homœopathy is the law of cure, and, in a general way, believe there are other ways of assisting that cure, there has nothing definite been formulated which can be adopted by each one of us individually. The difficulty has its origin in our colleges. We do not seem to understand clearly what antipathy means, we do not clearly understand what allopathy means, in fact, some do not seem to understand what Homœopathy means. (Applause.) I do not believe in isopathy, but that has been cleared up; we *all* agree there is no such thing, technically speaking.

From the discussion of our topic we are forcibly struck by the fact of the great confusion existing in the minds of many of the profession; and this simply shows the necessity of a deeper study of all therapeutic methods, whether curative, or merely adjuvant or palliative. This confusion results from the neglect of our colleges to teach definite ideas on the important subject of therapeutic methods. If our teachers of institutes do not feel themselves qualified to give clear instruction on these important questions we have been discussing, let them give some preliminary attention to logic, and then proceed to teach in accordance with facts; this can and should be done.

One of the first things to which attention may be called, and upon which I believe we all agree, is the truism laid before us by Dr. Mitchell, that "men can be actuated by one grand purpose, and attempt to further it in widely different ways." That all these different ways are of equal value, or productive of equally good results, may be questioned; but that the purpose which actuates different men to follow one or other of these different methods, is equally honest, may not be questioned.

In the practice of medicine we have seen that these various ways in which men strive to attain the same "grand purpose," are, the methods known, respectively, as antipathy, allopathy, and Homœopathy, besides mechanics, chemistry, antiparasitic means, etc.; and while men may strive honestly to heal the sick with any one of these methods, we have also found that the best results are secured when each of these methods is laid under contribution in the particular disease condition which comes within its sphere of applicability.

We must also conclude that the physician cannot practice medicine in fairness to art and science, to his patient and to himself, without familiarizing himself with all the various methods that men have found effective in accomplishing the one grand purpose of the physician, which Hahnemann says is the "sole duty of the physician."

In this discussion the endeavor has been to speak of the pathies from a scientific stand-point, a technical stand-point, and not to view them with inexpert eyes. The definition of antipathy, which has been given with greater or less variation by many various writers in the field of medical philosophy, is pronounced no more clearly than by Galen, the formulator of the maxim which embodies its meaning, *contraria contrariis curantur*. As elucidated, it would seem that this is quite as much a principle of hygiene as of therapeutics. When hungry, give food; when cold, supply heat; when weary from over-activity, secure rest; when there is too much congestion, use an astringent; when there is constipation, give a purgative; when there is pain, blunt the sensibilities. There are times when all these things may and should be done, even by a practitioner of Homœopathy. In history we find an illustration of antipathy carried to excess, run wild, in the teachings of Broussais, who persistently depleted all his patients, on the hypothesis that they were burned by too much phlogiston, and of Brown, who as persistently stimulated, in the vain belief (somewhat like the more modern Thompsonians), that heat meant life, and that it was necessary to keep life in the diseased by unremittingly feeding the fire.

As Dr. Mitchell remarks: "We all endorse most highly Hahnemann's scathing denunciation of antipathy as employed for chronic affections;" unless we expect such conditions as those suggested by Dr. J. P. Dake in his "Therapeutic Methods," "where it is important to deaden sensibility during the existence of affections not susceptible of cure." With such possible exceptions, we would limit our use of antipathic agents to a few acute conditions, such as kidney or gall-

stone colic, cases in which it is absolutely necessary to evacuate a torpid bowel, the use of emetics (peristalsis is reversed), or the use of Atropia in iritis, Eserin in glaucoma, or the local use of astringents in hemorrhage, or anodynes in the pains of the last stage of cancer and other incurable conditions; and also possibly in pain following surgical procedures.

Of allopathy, we find the technical definition outlined by Hahnemann as, "without ever regarding that which is really diseased in the body, it attacks those parts which are sound, in order to draw off the malady from another quarter, and direct it toward the latter;" *e.g.*, the use of a diuretic to relieve general dropsy.

There are few legitimate uses for allopathy. Occasionally detergent measures in cerebral congestion, especially when accompanied by convulsions; in incurable heart or liver disease the use of a diuretic to rid the patient of excessive dropsical accumulations; counter-irritation of the skin of the chest in acute congestion of the thoracic viscera; all these measures may be adopted by the consistent Homœopathist, as they do not interfere with the proper homœopathic treatment of the case, and yet may assist in the "grand purpose" for which we are all working.

In his well-considered essay Dr. Geohegan asks: "Can one who believes it (Homœopathy) to be a law consistently resort to other methods?" I would say in reply: *Within* its sphere, No; *outside* its sphere, Yes.

While all physicians are not equally well qualified to practice according to Homœopathy, and while some will find it necessary to resort to other methods than the homœopathic sooner than others, yet there are certain conditions which may be classed as not within the sphere of the law of similars, but within the sphere of antipathy, of allopathy, of mechanics, of chemistry, etc. Such conditions should be definitely classified and known to all physicians. As Dr. Geohegan well says: "Conscientious study will lessen the frequency of necessary departures from the law, and he who fails to leave some advancement as a heritage to the profession has been recreant to an important part of his trust." Speaking within the limits of the law, this is gospel, but as just stated there will remain a domain outside the circle of the law of similars that will never be conquered by "conscientious study" (or certainly it has not yet been conquered), where relief for some conditions of human misery must be sought, if relief is to be expected at all.

One of the most striking truths in Dr. Geohegan's paper, is his forceful announcement that "A great need of the profession to-day is the development of the artistic instinct in the individual." We need experts in all branches of the medical science and art, and not the least are they needed in the field of therapeutics.

Dr. Dudley clearly suggests to us the sphere of other methods than the homœopathic, when he says: "Its (Homœopathy's) curative domain does not include symptom groups, caused and maintained

directly by mechanical, physical, or chemical derangements of the organism, except when said derangements are themselves maintained by disorder of the vital actions."

For the conditions, therefore, which are "caused and maintained *directly* by mechanical, physical, or chemical derangements of the organism," we must look outside the possibilities of Homœopathy for aid. In this field we find allopathy, antipathy, and other non-homœopathic methods applicable; and they may be applied at times, before, and, at times, after the use of Homœopathy.

Our object in this discussion has not been to canvass the merits of Homœopathy, of these we are well satisfied, nor to compare the relative advantages of other therapeutic methods with Homœopathy; but simply to define the place of these methods (for we believe they all have a place), and show the circumstances under which we may consistently resort to other ways of healing the sick than the law of similars. In doing this we are simply walking in the paths of science. It is through systematized correct knowledge thus attained that the world has progressed in all the departments of knowledge, and it is through the aids furnished by science that future progress must continue; future progress in medicine as well as in all other branches of science, and of art. As Dr. Mitchell tells us, "Evolution in medicine has, in the long run, always led us to something better, and it always will;" and this evolution is due to the quiet working of the *vis a tergo* of science.

"We have stood too much in terror of this bugaboo, science," remarks Dr. Mitchell, but in concluding his scholarly dissertation, he corrects this criticism by saying that it is the dream of his later years that Homœopathy will be "raised to the plane of an exact science." And so Dr. Mitchell does not really think "science" such a bugaboo after all.

This placing Homœopathy upon "the plane of an exact science," however, cannot be attained through desultory reports of alleged homœopathic cures, and slip-shod methods of thought. Such an end can only be secured by systematizing our knowledge, and fully and clearly defining the sphere of Homœopathy. To do this it becomes equally necessary, primarily, that we know wherein other methods than the homœopathic are applicable. There is no other way in which this can be done *tuto, citu et jucunde*, than through the strict but correct requirements of science. Say what we please in condemnation of science, it is through science that the progress of Homœopathy must be secured, it is upon science that the foundations of Homœopathy have rested in the past of all ages, and upon science they will continue to rest for all future time.

Dr. Mitchell speaks of the flocking of the general profession to our ranks in the past, because of the large number of cures reported in print as due to Homœopathy, and thinks this plan should be adopted for the future. But though it may have been effective in the past, it will not be so in the future, simply because the rank and file of the medical profession is better educated now than half or even a quarter

of a century ago. In the past a mere assertion carried as much weight as does a demonstrated fact to-day.

It is not possible for even the best educated and most experienced physician to always decide whether a cure results from the *vis medicatrix naturæ*, or from the agent prescribed, and hence we find so much rubbish introduced into our literature under the guise of clinical observations. An illustration of this fact is to be found in the *Homœopathic Recorder* for May last, in which is a case from Dr. Goullon, under the title, "An Apis Cure." The cure was of "a thickly swollen right cheek." No other symptom or guide to the condition was given, nor did the doctor even see the patient, and yet with no other data Apis was prescribed, and a cure is claimed to have followed. In this case, however, the end seemed to have "justified the means," but how utterly empirical is a prescription based upon so weak a foundation, and yet the case is considered as illustrative of Homœopathy; *a priori* Homœopathy never, *a posteriori* Homœopathy—possibly. The *vis medicatrix* of the patient may have had quite as much to do with the cure as did the Apis, for all the report of this case can gainsay.

If we are really in earnest, and our faith in Homœopathy is sound, let us present facts to the world, demonstrable facts, based upon systematized truth, science and thinkers will accept the results of our labors. To secure such a desirable consummation, however, we *must* adopt the certain, definite, and concise methods of *modern* scientific research. If we expect to walk in the footprints of our fathers, we may also expect to attain no more advanced results. Hahnemann's day and our day are not the same. He knew much truth, but we stand on his shoulders.

Gonorrhœa.

By S. F. Shannon, M.D., Denver, Col.

Aching-drawing in the testicles: Copaiva, Hamamelis.
Aching in the testicles; orchitis; after suppressed gonorrhœa: Natrum mur.
Acrid, excoriating discharge: Argentum nit., Aurum mur., Capsicum, Kreosote, Mercurius corr., Sarsaparilla.
Acrid leucorrhœa, or menstrual flow; Gonorrhœa resulting from: Natrum mur.
Acrid white or yellow discharge: Sulphur.
Acute pain in the left testicle when walking: Jacaranda.
Acute stage; great pain, fever, and scanty discharge: Gelsemium.
After urination a sensation as if a drop remained behind which he cannot void: Kali bi., Thuja.
Albuminous yellow urethral discharge: Petroselinum.
Alkaline, ropy urine: Kali bich.
Alternation of gonorrhœal discharge and catarrhal discharge: Lac caninum.
Anus and genitals, Condylomata about the: Natrum sulph., Nitric acid.
Atrophy, induration of the testicles with inclination to atrophy: Rhododendron (see Aurum met., Iodum, Kali iod., Staphisagria, Zincum met.).
Atrophy of the testicles: Kali iod., Agnus, Capsicum, Causticum, Iodum, Aurum met., Zincum, Rhododendron.
Back: pain across the back, with red urine: Kali bi.
Biting, burning, and itching in the urethra before and after urination: Copaiva.
Biting, itching deep in the urethra; patient is nearly wild from it; wants to insert something rough to scratch it: Petroselinum.
Biting pain when urinating: Mercurius corr.
Bladder, burning in the bladder: Capsicum.
    Neck of the bladder is involved; severe, sudden urging to urinate; can hardly retain it: Petroselinum.
    Strangury; tenesmus of the bladder; smarting in the urethra: Terebinthina.
Blood-red urine: Kali iod., Terebinthina.
Bloody gonorrhœal discharge: Euphorbium, Millefolium, Nitric acid.
Bloody mucous or greenish discharge: Nitric acid.
Bloody or yellowish gonorrhœal discharge: Nitric acid.
Bloody, watery gleet: Muriatic acid.

Bloody, watery, slimy discharge: Millefolium.
Bluish-red scrotum: Muriatic acid.
Bowels; feeling of great debility after each movement of the: Hydrastis.
Bruised pain in the testicles: Aconite, Argentum met., Clematis, Cocculus, Digitalis, Hepar, Natrum carb., Oxalic acid, Palladium, Rhododendron.
Burning and itching in the glans, which is swollen and bluish-red: Doryphora.
Burning and sensation of warmth in the vagina: Copaiva.
Burning and soreness in the urethra: Silica.
Burning and tingling in the urethra: Cuprum arsen.
Burning, biting pain after urinating: Capsicum.
Burning during coitus, and while urinating: Sulphur.
Burning green discharge: Bryonia.
Burning in the bladder: Capsicum.
Burning in the neck of the bladder and in the urethra: Copaiva.
Burning in the orifice of the urethra before, during, and after urination: Capsicum, Kali bi.
Burning in the prepuce and glans: Cannabis sat.
Burning in the testicles: Nitric acid.
Burning in the urethra: Kali iod., Lithium carb., Mercurius, Cepa, Apis, Cantharis, Capsicum, Copaiva, Nitric acid, Silica, Natrum sulph., Oxalic acid, Cuprum arsen.
Burning in the vagina, can hardly keep still: Sulphur.
Burning intolerable in the fore part of the urethra: Mercurius.
Burning, itching, stinging, and throbbing in the urethra: Mercurius corr.
Burning in the urethra, worse after urinating: Nitric acid, Cantharis.
Burning pain during seminal discharge during coitus (stricture): Clematis.
Burning pain in the right testicle: Terebinthina.
Burning, shooting pains: Sulphur.
Burning, smarting pains during urination: Armoracea, Cannabis sat., Cantharis, Capsicum, Chelidonium, Eryngium, Mercurius corr., Mercurius.
Burnt; penis feels as if sore or burnt: Cannabis sat.
Catarrhal discharge sets in the gonorrhœal discharge improves: Lac caninum.
Cat's urine, urine smells like: Jacea.
Checked gonorrhœa, rheumatism after: Aconite, Asarum, Clematis Conium, Copaiva, Gelsemium, Kalmia, Kali iod., Mezereum, Phytollacca, Pulsatilla, Rhus tox., Sarsaparilla, Sabina, Terebinthina, Thuya.
Checked gonorrhœa, orchitis after: Antimonium tart., Argentum nit., Clematis, Gelsemium, Hamamelis, Kali mur., Kali sulph., Mezereum, Natrum mur, Pulsatilla, Spongia.
Chordee which can only be subdued by cold water: Capsicum.

Chronic gleet: Argentum nit., Aurum met., Capsicum, Ferrum met., Hydrastis, Kali bi., Natrum mur., Psorinum, Sanguinaria.
Clear discharge; sometimes yellowish; cutting in the urethra after urinating: Natrum mur.
Clear, transparent mucous discharge: Cannabis sat., Mezereum, Natrum mur., Phosphoric acid.
Coitus; burning during coitus, and while urinating: Sulphur.
Burning pain during seminal discharge during coitus (stricture): Clematis.
Gonorrhœa renewed by: Thuja.
Condylomata: Natrum sulph., Nitric acid, Thuja.
Congestion; gonorrhœa with great congestion to the parts: Mercurius sulph.
Constricting pain alternating with heat and stitches in the testes: Nux vomica.
Contusive pain in the testicles with gonorrhœa: Argentum met.
Corona glandis; itching, crawling sensation at the: Natrum mur.
Copious yellow discharge with burning and restlessness: Arsenicum s. f.
Corona glandis swollen; discharge of pus: Cinnabaris.
Cramplike, contractive pain in the testicles: China.
Crawling-tickling in the urethra: Ferrum iod.
Creamlike discharge from the urethra: Capsicum, Pulsatilla.
Crushed feeling in the testicles: Aconite, Argentum met., Causticum, Rhododendron.
Cutting between the labia during micturition: Cannabis sat.
Cutting-drawing from the ring into the left testicle: Terebinthina.
Cutting in the testes: Berberis, Phosphoric acid, Sepia, Terebinthina.
Cutting in the urethra after urinating: Natrum mur.
Dark redness of the glans; soreness to touch; prepuce painful, cannot retract it: Sabina.
Debility; feeling of great debility after a movement of the bowels: Hydrastis.
Decomposed, urine smells as if: Hydrastis.
Depression; gonorrhœa with great moral and physical depression: Hydrastis.
Discharge: Bloody, watery gleet: Muriatic acid.
Bloody, water, slimy: Millefolium.
Clear, but sometimes yellowish; cutting in the urethra after urinating: Natrum mur.
Clear, transparent mucus: Cannabis sat.
Copious, painless, almost watery: Hydrastis.
Creamlike: Capsicum, Pulsatilla.
Free, mucoid; patches of induration along the urethra: Mercurius iod. rub.
From the urethra of a dark reddish color: Cubeba.
Is mixed with blood: Euphorbium, Kali iod., Millefolium, Nitric acid.
Jelly-like, stringy, profuse: Kali bi.

Discharge: Light yellow: Tarentula.
Muco-purulent: Kali iod., Pulsatilla.
Of pus from the urethra: Calcarea ost., Capsicum, Chelidonium, Cinnabaris, Clematis, Hepar, Mercurius, Nitric acid, Sabina, Silica.
Of pus or pus-like, bloody mucus: Silica.
Of white or yellow acrid mucus: Sulphur.
Of watery fluid, scanty in quantity, glues lips of meatus, leaves little or no stain: Phosphorus.
Only during the night; stains the linen yellow; no burning on urinating: Sepia.
Scanty, very thick: Rhus tox.
Shreddy: Silica.
Thick and purulent: Cannabis sat.
Thick, fetid, pus-like: Silica.
Thick, green: Kali iod., Pulsatilla.
Thick, pus-like: Cubeba, Hydrastis, Silica.
Thick yellow, or yellowish-green: Pulsatilla.
Thin, burning on urinating: Nux vomica.
Thin, transparent, mixed with opaque white mucus; stains the linen yellow: Medorrhinum.
White: Capsicum, Cinnabaris, Copaiva, Cuprum met., Ferrum met., Kobalt, Mercurius, Natrum mur., Nitric acid, Petroselinum, Sepia, Sulphur, Thuya, Zincum met.
Yellow, green: Argentum met., Cinnabaris, Cubeba, Kobalt, Mercurius, Thuja.
Yellowish: Agnus castus, Alumina, Argentum met., Arsenicum s. f., Baryta carb., Cinnabaris, Cubeba, Jacaranda, Mercurius sol., Natrum sulph.
Yellowish, albuminous urethral: Petroselinum.
Yellowish, green, thick, little pain: Natrum sulph., Pulsatilla.
Yellowish-white, very profuse: Cannabis ind., Sepia.
Dragging in the right groin to the testicle; thence to the left testicle; thence to the left groin: Hydrastis.
Drawing-burning while urinating: Medorrhinum.
Drawing pain in the inguinal region: Mercurius.
Drawing pain in the left testicle and cord: Clematis.
Dripping away of the urine, which burns like fire: Eryngium.
Dropsical swelling of the penis: Fluoric acid.
Dysuria; frequent urging; scanty urine; and frequent tenesmus: Gelsemium.
Early stage of gonorrhœa, no strangury: Copaiva.
Eczema, gleet combined with: Kali mur.
Enlarged right testicle (after suppressed gonorrhœa): Hamamelis.
Epididymitis, gonorrhœal, especially of a congestive or subacute character: Hamamelis, Pulsatilla.
Epididymis, painful swelling of the: Cinchona, Pulsatilla.
Erections; painful erections: Cannabis sat., Cantharis, Capsicum,

Eryngium, Gelsemium, Hepar, Ignatia, Kali carb., Medorrhinum, Mercurius, Nitric acid, Nux vomica, Pulsatilla, Sabadilla, Senega, Thuja, Zingiber.

At night: Capsicum, Eryngium, Graphites, Silica.

Erosions; red erosions on the glans: Thuja.

Excoriating acrid discharge: Mercurius corr.

Excruciating pain in the urethra while urinating: Doryphora.

Females; cannot even bear the touch of the sheet on the genitals: Muriatic acid.

Forked stream: Thuja.

Formication over the body; gleety discharge: Cedron.

Fossa navicularis, severe pains in the; dribbling of the urine after urination: Petroselinum.

Free mucoid discharge; patches of induration along the urethra: Mercurius iod. rub.

Fulness; sensation of fulness in both spermatic cords: Fluoric acid.

Genitals; cannot bear even the touch of the sheet on the (females): Muriatic acid.

Great itching about the genitals; burning after scratching: Natrum sulph.

Yellow-brown spots on the: Kobalt.

Glans penis is bluish-red, itches and burns: Doryphora.

Is dark-red, sore to touch; prepuce is painful, cannot retract it: Sabina.

Is hot, painful, sensitive to touch: Mecurius corr.

Glans, red erosions on the: Thuja.

Sharp stinging pains in the glans every few moments: Caulophyllum.

Swollen and very sensitive: Cannabis sat.

Gleet: Bloody, watery discharge: Muriatic acid.

Combined with eczema: Kali mur.

Gleet-like discharge of clear mucus; transparent watery slime (after the use of nitrate of silver): Natrum mur.

Gleet in females; clear or green discharge, intense itching: Natrum mur.

Gleet with copious, painless, watery discharge: Hydrastis.

Gleet with want of sexual desire or erections: Agnus castus.

Gluey, sticky discharge: Graphites.

Gonorrhœa after the abuse of cubebs and copaiva; thin discharge; burning on urinating: Nux vomica.

Gonorrhœal epididymitis, especially of a congestive or subacute character: Hamamelis.

Gonorrhœal-like discharge: Cedron, Guiacum.

Gonorrhœal phimosis: Cannabis sat., Cantharis, Mercurius.

Gonorrhœal rheumatism: Aconite, Asarum, Clematis, Conium, Copaiva, Kalmia, Kali iod., Gelsemium, Mezereum, Phytolacca, Pulsatilla, Rhus tox., Sabina, Sarsaparilla, Thuja.

Gonorrhœa and secondary syphilis with ulcerated buboes: Chelidonium.

Gonorrhœa complicated with syphilis: Chelidonium, Cinnabaris, Mercurius, Nitric acid.

Gonorrhœa: discharge greenish-yellow: Argentum met., Cannabis sat., Copaiva, Kali sulph., Kobalt, Medorrhinum, Mercurius, Nitric acid, Thuja.
Indurated testicles from suppressed: Agnus castus, Alumina, Ammoniacum, Calcarea fluor, Cinnabaris, Clematis, Copaiva, Jacea, Rhododendron.
Inflammatory gonorrhœa with discharge of pus: Sabina.
Of a torpid character in the course of syphilis: Mercurius.
Orchitis after checked gonorrhœa: Antimonium tart., Argentum nit., Clematis, Glesemium, Hamamelis, Kali mur., Kali sulph., Mezereum, Natrum mur., Phytolacca, Pulsatilla, Spongia.
Suppressed gonorrhœa: Benzoic acid, Berberis, Cantharis, Clematis, Daphne, Psorinum, Pulsatilla, Sarsaparilla.
Sycosis: Natrum sulph.
Greasy pellicle on the urine: Kobalt.
Greenish, burning discharge: Bryonia.
Greenish or yellow mucous, purulent discharge: Kali sulph., Nitric acid.
Greenish-yellow gonorrhœal discharge: Argentum met., Cannabis sat., Copaiva, Kali sulph., Kobalt, Medorrhinum, Mercurius, Nitric acid, Thuja.
Greenish-yellow, thick, profuse discharge: Lithium carb.
Green or bloody discharge: Nitric acid.
Green, thick gonorrhœal discharge: Kali iod.
Green, yellow, watery discharge: Thuja.
Hair: Falling off of the hair from the pubes: Natrum mur.
Hardness and swelling of both testicles; testes drawn up: Nux vomica.
Heat and stitches alternating with constricting pain in the testes: Nux vomica.
Heat; great amount of heat, but little pain; smarting at the meatus: Gelsemium.
Hematuria, gonorrhœa with: Mezereum.
Hypertrophied testicles after suppressed gonorrhœa: Baryta mur., Bromium, Iodum.
Hypogastrium, pains across the, from side to side (suppressed gonorrhœa): Pulsatilla.
Impotence after gonorrhœa: Thuja, Agnus.
With gleet, especially in those who have frequently had gonorrhœa: Agnus castus.
Indulgence in liquor or spiced food renews the discharge: Petroselinum.
Indurated testicles from suppressed gonorrhœa: Agnus castus, Ammoniacum, Alumina, Calcarea fluor, Cinnabaris, Clematis, Copaiva, Jacea, Rhododendron.
With inclination to atrophy: Rhododendron.
Induration and swelling of the testicles: Copaiva.
Induration of the left testicle after the abuse of Sulphate of Copper: Kali mur.

Induration; patches of induration along the urethra: Mercurius iod. rub.
Inflammation of the ovaries after suppressed gonorrhœa: Cantharides.
Inflammation of the urethra and prepuce from the discharge: Sulphur.
Inflammation, swelling, and tickling at the meatus; pulsative pain in the penis: Copaiva.
Inflammatory gonorrhœa with discharge of pus: Sabina.
Inguinal region, drawing pain in the: Mercurius.
Intermittent gonorrhœal pains in various portions of the urethra: Lac caninum.
Itching and burning in the glans, which is bluish-red: Doryphora.
Itching and swelling of the prepuce: Jacea, Silica.
Itching, biting, burning pain in the urethra: Copaiva.
Itching-biting pain deep in the urethra; drives the patient nearly wild; wants to push in some rough substance and scratch it: Petroselinum.
Itching-crawling sensation in the corona glandis: Natrum mur.
Itching; great itching of the genitals: Natrum sulph.
Itching of the prepuce: Aloe socc., Aconite, Cannabis sat., Chamomilla, Colchicum, Euphorbium, Euphrasia, Gymnocladus, Ignatia, Jacaranda, Lycopodium, Nitric acid, Nux Vomica, Pulsatilla, Rhus tox., Sepia, Silica, Violatri, Zingiber.
Itching, stinging on the glans and scrotum: Natrum mur.
Itching, stinging, throbbing, burning in the urethra: Mercurius corr.
Itching, stitches in the external portion of the urethra between the acts of urination: Euphorbium.
Itching, stitches in the scrotum: Jacea.
Jelly-like, profuse, stringy discharge: Kali bi.
Knots; urethra feels as if drawn up into knots: Cannabis sat.
Labia; cutting between the labia during micturition: Cannabis sat.
Lead; sensation as if hot lead was poured along the urethra: Cantharis.
Left labia greatly swollen from gonorrhœa; terrible pains when urinating: Lac caninum.
Left-sided orchitis; smooth, hard swelling: Rhododendron.
Left testicle; acute pain in the, when walking: Jacaranda.
Cutting-drawing from the ring into the: Terebinthina.
Enlarged; painful; must be supported; suppressed gonorrhœa: Pulsatilla.
Hard and tender to touch: Clematis.
Induration of the, after abuse of Sulphate of Copper: Kali mur.
Swelling of the left testicle with intolerable drawing pain in the testicle and cord: Clematis.
Swollen; tearing pains: Rhododendron.
Legs; walks with the legs wide apart: Cannabis sat.
Leucorrhœa; gonorrhœa resulting from acrid leucorrhœa, or menstrual flow: Natrum mur.
Linen; discharge stains the linen yellow: Fluoric acid, Medorrhinum, Sepia.

Meatus; itching, intense at the meatus: Sulphur.
Sticking together of the lips of the: Camphora, Cannabis sat., Cuprum met., Gambogia, Sepia, Tellurium.
Swelling, tickling, and itching at the: Copaiva.
Menstrual flow; gonorrhœa resulting from acrid menstrual flow, or leucorrhœa: Natrum mur.
Milky discharge: Capsicum, Cuprum arsen., Copaiva, Ferrum met., Mercurius.
Moral and physical depression great: Hydrastis.
Morning; whitish, painless discharge, worse toward morning: Mezereum.
Moist; scrotum is constantly moist and damp: Cuprum arsen.
Mouth; offensive odor from the mouth; ptyalism; gums swollen and bleed easily: Mercurius.
Muco-purulent discharge: Cannabis sat.: Kali iod.
Muco-pus; orifice of the urethra is closed by: Cannabis sat., Medorrhinum.
Navicular fossa, frequent voluptuous itching in the: Petroselinum.
Neck of the bladder is involved; sudden urging to urinate immediately: Petroselinum.
Night; discharge only at night of a drop or two, staining the linen yellow: Sepia.
Green, purulent discharge, worse at night: Mercurius, Mercurius corr.
Œdematous prepuce and scrotum: Natrum sulph.
Orchitis, acute or chronic, with fistulous ulcers: Phytolacca.
After checked gonorrhœa: Antimonium tart., Argentum nit., Clematis, Gelsemium, Hamamelis, Kali mur., Kali sulph., Mezereum, Natrum mur., Pulsatilla, Spongia.
Intense soreness and swelling: Hamamelis, Medorrhinum.
Left-sided, smooth, hard swelling: Rhododendron.
Soreness, swelling, and dragging of the testes: Medorrhinum.
Orifice of the urethra is closed by muco-pus: Cannabis sat., Medorrhinum.
Ovaries inflamed after suppressed gonorrhœa: Cantharis.
Painful erections: Cantharis, Capsicum, Eryngium, Gelsemium, Medorrhinum, Mercurius.
Painless copious, almost watery discharge: Hydrastis.
Painless urination; slight redness at the meatus; no swelling of the glans: Cubeba.
Painless, whitish discharge, worse toward morning: Mezereum.
Pains, of a burning, shooting character: Sulphur.
Penis and testes are enormously swollen: Mercurius corr., Thuja.
Penis and testes are swollen: Mercurius corr., Millefolium, Thuja.
Penis, dropsical swelling of the: Fluoric acid.
Penis feels as if sore or burnt: Cannabis sat.
Penis; pain at the end of the penis while urinating: Medorrhinum.
Severe pain at the root of the; irresistible desire to urinate, can hardly retain it: Petroselinum.

Penis: Soreness of the penis, with pain in the prostate gland: Cuprum arsen.
Swollen, inflamed; constant semi-erections: Kali iod.
Perineum; pain in the perineum at the end of urination: Coca.
Prepuce and urethra are inflamed by the discharge: Sulphur.
Prepuce and scrotum are œdematous: Natrum sulph.
Prepuce: Burning in the prepuce and glans: Cannabis sat., Mercurius.
Prepuce greatly swollen, inflamed, sensitive: Mercurius sol.
Itching and redness of the: Silica.
Itching and swelling of the: Jacea.
Itching of the: Aloe socc., Jacea, Silica, Aconite, Cannabis sat., Chamomilla, Colchicum, Euphorbium, Euphrasia, Gymnocladus, Ignatia, Jacaranda, Lycopodium, Rhus tox., Sepia, Viola tri., Zingiber.
Margin of the prepuce is sore: Muriatic acid.
Priapism; severe priapism with chordee: Petroselinum.
Prickling in the prepuce: Jacaranda.
Profuse, thick, greenish-yellow discharge, alternating with hematuria: Lithium carb.
Prostate gland; acute inflammation of the prostate gland after maltreated stricture: Mercurius dulc.
Pain in the, with gonorrhœa: Capsicum.
Prostatitis after gonorrhœa: Sulphur, Thuja.
Protracted gonorrhœa: Mygale.
Pulsative pain throughout the penis: Copaiva.
Purulent discharge: Capsicum, Cuprum arsen., Mercurius, Sabina, Kali sulph.
Purulent discharge; yellow mucous or greenish discharge: Kali sulph., Mercurius.
Purulent greenish discharge, worse at night: Mercurius, Mercurius corr.
Purulent white discharge from the urethra: Cuprum arsen.
Pus; discharge of pus from the urethra: Alumina, Calcarea ost., Capsicum, Chelidonium, Cinnabaris, Clematis, Hepar, Mercurius, Nitric acid, Sabina, Silica.
Pus-like discharge from the vagina: Hydrastis.
Pus-like, thick, yellow discharge: Cubeba, Hydrastis, Mercurius, Sabina.
Pus; light-yellow pus is discharged from the urethra: Alumina.
Pus thick and glutinous from the urethra: Cubeba.
Rheumatism after suppressed gonorrhœa: Aconite, Asarum, Clematis, Conium, Copaiva, Kalmia, Gelsemium, Mezereum, Phytolacca, Pulsatilla, Rhus tox., Sabina, Sarsaparilla, Thuja.
Right testicle, burning pain in the posterior part of the: Terebinthina.
Enlarged after suppressed gonorrhœa: Hamamelis.
Severe pain in the, better after urinating: Kobalt.
Swollen; drawing and tension in the spermatic cord: Chelidonium.

Root of the penis; severe pain at the root of the penis; irresistible desire to urinate: Petroselinum.
Scalding, sticking, smarting pain in the urethra: Capsicum.
Scalding when urinating; urethra swollen; forked stream: Thuja.
Scanty, painless, thin discharge: Rhododendron.
Very thick discharge; burning on urinating: Rhus tox.
Scrotum and prepuce œdematous: Natrum sulph.
Scrotum bluish-red: Muriatic acid.
Heat and swelling of the: Jacaranda.
Is constantly moist and damp: Cuprum arsen.
Itching-stitches in the: Jacea.
Itching and stinging on the glans and scrotum: Natrum mur.
Profuse cold sweat of the scrotum at night: Hamamelis.
Secondary gonorrhœa with a greenish discharge: Kobalt.
Second stage with a green, yellow, thick discharge: Hydrastis.
Sensation as if hot lead was poured along the urethra: Cantharis.
Sensitiveness of the female genitals to even the touch of the sheet: Muriatic acid.
Shooting, burning pains: Sulphur.
Slimy, watery, bloody discharge: Millefolium.
Smarting, burning pains during urination: Armoracea, Cannabis sat., Cantharis, Capsicum, Chelidonium, Eryngium, Mercurius corr., Mercurius.
Smarting in the end of the urethra during micturition: Kobalt.
Smarting in the urethra while urinating: Arum, Benzoic acid, Cannabis sat., Kobalt, Mercurius corr.
Sore feeling throughout the whole urethra: Medorrhinum.
Soreness and burning in the urethra while urinating: Silica.
Soreness and swelling intense in orchitis: Hamamelis.
Soreness of the margin of the prepuce: Muriatic acid.
Sore or burnt, penis feels as if: Cannabis sat.
Spermatic cords, soreness in the, after suppressed gonorrhœa: Thuja.
Spermatic cord, pain in the right, after urinating: Lithium carb.
Spermatic cords, sensation of fulness in both of the: Fluoric acid.
Spray; urine is voided in a spray: Cannabis sat.
Spurious gonorrhœa: Hydrastis.
Squeezed sensation in the testicles: Baptisia, Silica.
Sticking together of the lips of the meatus: Camphora, Cannabis sat., Cuprum met., Gambogia, Sepia, Tellurium.
Sticky, gluey discharge: Graphites.
Stinging and itching on the glans and scrotum: Natrum mur.
Stinging, titillating along the whole urethra: Mezereum.
Stinging, sharp pains in the glans every few minutes: Caulophyllum.
Stinging, throbbing, burning, itching in the urethra: Mecurius corr.
Stitches and heat alternating with constrictive pain in the testicles: Nux Vomica.
Stitches extending back through the urethra: Mercurius corr.
Stitches in the fore part of the urethra when not urinating: Capsicum

Stitches in the penis when sitting: Lithium carb.
Stops and starts; stream of urine stops and starts: Gelsemium.
Strangury and sudden urging to urinate: Petroselinum.
Gonorrhœa with; tenesmus of the bladder; smarting in the urethra: Terebinthina.
Stream of urine stops and starts again: Gelsemium.
Stricture after suppressed gonorrhœa: Indigo.
Burning pain during seminal discharge during coitus: Clematis.
Spasmodic stricture of the urethra: Gelsemium.
Stringy, jelly-like, profuse discharge: Kali bi.
Sulphate of copper, induration of the left testicle after abuse of: Kali mur.
Suppressed gonorrhœa with fever, rheumatism, and orchitis: Gelsemium.
Suppuration between the glans and prepuce: Mercurius corr.
Suppurative stage: Calcarea sulph.
Sweat; profuse cold sweat of the scrotum at night: Hamamelis.
Swelling and soreness intense in orchitis: Hamamelis.
Swelling and tenderness of the testicles: Nitric acid.
Swelling, tickling, and itching at the meatus: Copaiva.
Swelling of the glans penis: Cannabis sat., Arsenicum alb., Cinnabaris, Corallium rub., Mercurius, Natrum carb., Plumbum, Rhus tox., Sulphur, Thuja.
Swelling of the penis and testes: Millefolium.
Swelling of the right testicle, with tension and drawing in the cord: Chelidonium.
Swelling of the testicles from suppressed gonorrhœa: Agnus, Aurum met., Belladonna, Cantharis, Clematis, Mercurius, Natrum carb., Natrum mur., Nitric acid, Pulsatilla, Rhus tox., Selenium.
Syphilis: Gonorrhœa complicated with syphilis: Chelidonium, Cinnabaris, Mercurius.
Gonorrhœa of a torpid character in the course of syphilis: Mercurius.
Tape; feeling as if a tape prevented urination: Thuja.
Tearing pains in the left testicle, which is swollen: Rhododendron.
Tenderness and swelling of the testicles: Nitric acid.
Tenesmus of the bladder; strangury; smarting in the urethra: Terebinthina.
Testicle: left testicle is hard and very painful.
Right testicle enlarged after suppressed gonorrhœa: Apis, Argentum met., Argentum nit., Aurum met., Clematis, Hamamelis, Kobalt.
Testicles: aching in the testicles; orchitis; after suppressed gonorrhœa: Natrum mur.
And penis are enormously swollen: Mercurius corr.
Atrophy of the: Agnus, Capsicum, Causticum, Iodum, Kali iod., Zincum met.

Testicles: bruised pain in the: Aconite, Argentum met., Clematis, Cocculus, Digitalis, Hepar, Nitric acid, Oxalic acid, Palladium, Rhododendron.
Burning in the: Mercurius, Pulsatilla, Nitric acid, Staphisagria.
Contusive pain in the, with gonorrhœa: Argentum met., Rhododendron.
Cutting in the: Berberis, Phosphoric acid, Sepia, Terebinthina.
Hypertrophied after gonorrhœa: Baryta mur., Bromium, Hamamelis, Iodum.
Induration of the, from suppressed gonorrhœa: Agnus, Alumina, Ammoniacum, Calcarea fluor, Cinnabaris, Clematis, Copaiva, Jacea, Rhododendron.
Pain in the, and, when sitting, stitches in the penis: Lithium carb.
Soreness, swelling, and dragging of the: Medorrhinum.
Squeezed pain in the: Baptisia, Silica.
Swelling and hardness of both: testicles drawn up: Nux Vomica.
Swelling and tenderness of the: Nitric acid, Nux Vomica.
Swollen, hard, and shining: Mercurius.
Thick, green gonorrhœal discharge: Kali iod., Pulsatilla.
Greenish-yellow, profuse discharge alternating with hematuria: Lithium carb.
Thick, scanty discharge: Rhus tox.
Thick, yellow discharge: Hydrastis, Pulsatilla.
Thick, yellow, pus-like discharge: Cubeba.
Thin discharge, burning on urination, after abuse of cubebs and copaiva: Nux Vomica.
Thin, transparent discharge, mixed with opaque, whitish mucus, which stains the linen yellow: Medorrhinum.
Throbbing, itching, burning, stinging in the urethra: Mercurius corr.
Tingling and burning in the urethra: Cuprum arsen.
Titillating and smarting along the whole urethra: Mezereum.
Transparent discharge: Hamamelis, Medorrhinum, Natrum mur.
Transparent, watery, slimy discharge (after nitrate of silver): Nat. mur.
Urethra and prepuce are inflamed by the discharge: Sulphur.
Burning and soreness in the, on urinating: Silica.
Burning in the: Allium cepa, Apis, Cantharis, Capsicum, Kali bi., Copaiva, Lithium carb., Mercurius, Oxalic acid, Nitric acid, Armoracea, Chelidonium, Eryngium, Kali iod., Natrum sulph., Cuprum arsen., Silica.
Burning in the, before, during, and after urination: Capsicum, Kali bi.
Cutting in the, after urinating: Natrum mur.
Excruciating pain in the, when urinating: Cantharis, Doryphora.
Feels as if drawn up into knots: Cannabis sat.
Intolerable burning in the fore part of the: Mercurius.

Urethra: Needle-like stitches in the: Nitric acid.
Painful redness of the: Gelsemium.
Smarting in the end of the, while urinating: Kobalt.
Sore feeling through the whole: Medorrhinum.
Spasmodic stricture of the: Gelsemium.
Stitches extending back through the: Mercurius corr.
Stitches in the fore part of the, when not urinating: Capsicum.
Tingling and burning in the: Cuprum arsen.
Yellow drops from the, in the morning: Fluoric acid.
Yellow purulent or mucous discharge from: Copaiva.
Urinate; desire to urinate on hearing water running: Hamamelis Kreosote.
Desire to urinate on seeing water running: Sulphur.
Urinating; after urinating, a sensation as if a drop remained behind which he could not void: Kali bi.
Biting pain in the urethra when urinating: Mercurius corr.
Burning in the urethra greatly worse after: Nitric acid.
Burning, smarting pains while: Armoracea, Cantharis, Capsicum, Chelidonium, Eryngium, Mercurius, Mercurius corr., Natrum sulph.
Cutting in the urethra after: Natrum mur.
Drawing, burning while: Medorrhinum.
Excruciating pain in the urethra while: Cantharis, Doryphora
Scalding when: Cantharis, Thuja, Capsicum.
Severe pain in the right testicle better after: Kobalt.
Urination frequent; scalding, smarting, sticking pain in the urethra; tenesmus, and even chordee: Capsicum.
Urination painless; slight redness of the meatus; no swelling of the glans: Cubeba.
Sensation as if a tape prevented: Thuja.
Urine is alkaline, ropy: Kali bi.
Is blood-red: Kali iod.
Cannot be retained more than an hour: Medorrhinum.
Dripping away of the urine: Eryngium.
Extremely offensive urine; it smells like horses' urine: Nitric acid.
Greasy pellicle on the: Kobalt.
Is voided in a spray: Cannabis sat.
Red; pain across the back: Kali bi.
Stops and starts again: Gelsemium.
Vagina, burning and sensation of warmth in the: Copaiva.
Burning in the, can hardly keep still: Sulphur.
Discharge of fetid mucus from the: Capsicum.
Pus-like discharge from the: Hydrastis.
Vulva; itching of the vulva during urination: Silica.
Walks with the legs wide apart: Cannabis sat.
Warmth; burning and sensation of warmth in the vagina: Copaiva.
Water running; desire to urinate on hearing water running: Hamamelis. Kreosote.

Water running: Desire to urinate on seeing water running, Sulphur.
Watery, bloody gleet: Muriatic acid.
Watery, bloody, slimy discharge: Millefolium.
Watery fluid discharge; scanty in the morning, leaving little or no stain on the clothes: Phosphorus
Watery mucous discharge; urethra sore to touch; stinging and titillating along whole urethra and in perineum: Mezereum.
Watery, painless, copious discharge: Hydrastis.
Watery, yellow-green discharge: Thuja.
Weeping; constant weeping due to relaxation of the urethral mucous membrane: Hydrastis.
White discharge: Capsicum, Cuprum arsen., Copaiva, Ferrum met., Petroselinum.
White purulent discharge from the urethra: Cuprum arsen.
White or yellowish acrid discharge: Sulphur.
Whitish discharge; severe erections; burning on urination; rheumatism; orchitis: Gelsemium.
Whitish, painless discharge; worse toward morning: Mezereum.
Yellow albuminous urethral discharge: Petroselinum.
Yellow-brown spots on the genitals: Kobalt.
Yellow discharge stains the linen yellow: Fluoric acid, Medorrhinum Sepia.
Yellow drop from the urethra in the morning: Fluoric acid.
Yellow-green watery discharge: Thuja.
Yellowish, but usually clear discharge; cutting in the urethra after urinating: Natrum mur.
Yellowish-green discharge: Argentum met., Cannabis sat., Copaiva, Kali sulph., Kobalt, Medorrhinum, Mercurius, Nitric acid, Thuja.
Yellowish or bloody discharge: Nitric acid.
Yellowish white liquid discharged from the urethra: Jacaranda, Medorrhinum.
Yellowish-white, very profuse discharge: Cannabis ind., Sepia.
Yellow mucous discharge: Kali sulph.
Yellow or white acrid discharge: Sulphur.
Yellow, profuse, purulent discharge: Medorrhinum.
Yellow discharge from the urethra: Agnus, Argentum met., Arsenicum s. f., Baryta carb., Cubeba, Fluoric acid, Hydrastis, Corallium rub., Nitric acid, Natrum mur., Pulsatilla, Petroselinum.

REPORT

OF THE

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What is the Most Characteristic Grouping of Physical Signs Found in the Pneumonias of Infants and Young Children?

BY WILLIAM A. VAN BAUN, M.D., PHILADELPHIA, PA.

Pneumonia in infancy and childhood, presenting a diversity of phenomena not at all prevalent in adults, consequently increases the difficulty of diagnosis. Among the earliest symptoms are pain in the head and belly, the latter being far more frequently found than pain in the chest, so characteristic in adults. Sometimes a pneumonia involvement leads to a pleurisy, which may become extensive, and when the lobe or lobules involved is the lower left, the pericardium becomes inflamed, and in either case, pain, oppression, and distress may be marked. The bowels are usually regular, but at times either diarrhœa or constipation may be present; this latter condition may be so pronounced as to suggest obstruction of the bowels. Pyrexia, as a rule, is high, but is of no special significance. A study of the pulse and respiration is a reliable assistance to a proper diagnosis, for the breathing is not only accelerated and out of proportion to the pulse, but a characteristic grunting noise accompanies each respiration. Cough is frequently absent. Delirium and drowsiness may be present; and nervous phenomena exist in a large percentage of these cases, ranging from headache, which is quite prevalent in children old enough to complain, to delirium with wildness or even mania. Convulsions may, and frequently do, occur in the very young, being general and often repeated, coming either early or late in the disease, they are usually followed by a condition of drowsiness or stupor, less frequently by delirium.

Mental symptoms in childhood suggestive of meningitis always call for a pulmonary examination before giving a diagnosis, for it is known that many of the so-called recoveries from meningitis, especially of the tubercular variety, have been simply cases of cerebral symptoms of pneumonic origin.

The marked prominence of these nervous phenomena is due to the peculiar susceptibility of the nervous system in children, and the symptoms have not the same serious import as when found in adults. Although a convulsion appearing late in the disease, with apathy,

stupor, or delirium following, associated with dilated or contracted pupils, tossing of head, markedly disturbed pulse-respiration rates, with a rapid, intermittent, or irregular pulse, Cheyne-Stokes breathing, retracted abdomen, and involuntary urine and fæces, the prognosis will be gloomy enough, be it in childhood, adolescence, or maturity.

In children pneumonia is almost always a primary condition, occurring in the previously healthy, with a good prognosis, and rarely fatal, excepting from the complications, empyema, meningitis, or pericarditis. The mortality ranging from two to five per cent. Whereas, broncho-pneumonia, excepting the type which is of sudden onset and of short duration, occurring in the previously healthy, with a persistent high temperature, without any marked tendency to relapse, and terminating by the crises; in other words, where the clinical symptoms are those of croupous pneumonia, but the lesions those of broncho-pneumonia, and where bacteriological examination reveals the presence of the pneumococcus, is, as a rule, secondary, occurring in delicate and debilitated children under three years, having a hospital mortality of fifty per cent. in primary cases and sixty-five per cent. in those of secondary type.

In these cases of pneumonia in children it is the rule for the general symptoms to correspond in degree with the extent and severity of the local lesion, and yet they are frequently out of all proportion to each other. A very small area of lung involvement being attended by profound symptoms, proving at times rapidly fatal, the previous health of the patient having been good, and *vice versa*. Massive pneumonia may appear and run its course with complete resolution, the symptomatic conditions being astonishingly light. It is claimed that in childhood the physical signs are often delayed, sometimes not appearing until after the crisis has passed. In this connection it is to be recalled that delayed or absent physical signs in cases presenting all the symptomatic indications may be due to an unrevealed pneumonia, located in the apex under the shoulder, or along the posterior border of the lung, where it lies against the vertebræ, so in all suspicious cases these regions will bear watching, and it is never well to dismiss the subject of pneumonia without examining carefully the axillary regions, high up, and the lung structure beneath the clavicles in front.

Are the Pneumonias of the Insane always Latent?

By Selden H. Talcott, M.D., Middletown, N. Y.

In some institutions pneumonia prevails to a considerable extent. This is due, we think, to the plan of working patients who are not very strong, and of exposing them unnecessarily to sudden and severe changes in the weather. From October 1, 1888, to September 30, 1896, there were 103 cases of pneumonia at the Hudson River State Hospital, and 95 cases at the Binghamton State Hospital. In this institution, during the same period, the number of pneumonia cases was 4. We attribute this to the fact that we are not in favor of working our patients very hard, nor of exposing them to weather changes any more than we are obliged to. We keep our weak, sickly patients in bed. The ventilation is free in the hospital wards, and sometimes the air passes through the open space quite rapidly; but our patients seldom take cold when in bed. They do not get into a hot and perspiring condition, and then suddenly cool off. The temperatures of the patients and the temperatures of the wards are kept as even as possible, and by avoiding sudden and great extremes we promote, we think, the health of those who are sent here for treatment. When pneumonia is developed among the insane, its symptoms are quite characteristic, although there is apt to be some indifference as to expectoration. Efforts in this direction are less marked than among those who are sane, and anxious to live. It is possible that pneumonia might be developed in some cases of terminal dementia, where the symptoms would not be discovered quite as easily as in a sane person; but, I think, that when serious and dangerous lesions of this kind occur, they are discoverable by those who make careful and frequent examinations.

I have answered your question according to my present light and knowledge, and hope it will be satisfactory.

When Shall We Pronounce our Cases of Pneumonia Well?

By Alfred Wanstall, M.D., Baltimore, Md.

Technically, typical croupous pneumonia should be pronounced "well" when the crisis has occurred. Croupous pneumonia terminating by crisis is, in my experience, rare. Practically, typical croupous pneumonia, as well as the atypical types, should not be pronounced well until resolution is complete. As the complications of pneumonia have been discussed by another speaker, the answer to the question: "When shall be pronounce our cases of pneumonia 'well'?" will practically limit itself to the subject of delayed resolution. Whether the disease occurs in middle life, as is common to the croupous variety, or at either of its extremes as broncho-pneumonia or capillary bronchitis, the results of delayed resolution are much the same. Absence of normal breath sounds, or absence of a normal temperature curve, or both, are the factors to be kept in mind in determining whether resolution has occurred or not.

With the thermometer in one hand and the stethoscope in the other our cases of pneumonia must be watched carefully from day to day until the breath-sounds are normal and the temperature also, both factors being indispensable and of equal importance. An abnormal temperature with normal auscultatory and percussion sounds should always awaken the suspicion of a deep-seated inaccessible lesion still unresolved, providing complications, accounting for it, can be excluded, and the patient must be most carefully watched. A perfectly normal temperature with abnormal breath-sounds should give rise to the suspicion of a thickened pleura, or an unabsorbed pleuritic effusion rather than to an unresolved pneumonia. I believe an unresolved pneumonia almost always betrays itself in some deviation of the temperature from the normal, the presence or absence of cough or expectorations being in no sense decisive.

The bacteriological findings are of little or no value here, mainly because, commonly, there are no expectorations, and in their presence the absence of the pneumococci would be of only negative value. Of more value, at least theoretically, are the blood findings. A more or less pronounced hyperleucocytosis accompanies the active disease—sometimes absent in the very mild cases, and in the very severe ones with no reaction—and in cases of delayed resolution the leucocytosis continues, though in a less marked degree. Taking into consideration the liability to errors of technique, and the fact that the leucocyte count varies within physiological limits, it is only in individual cases that the

leucocyte count may furnish positive indications. In a recent case, in which resolution was delayed nearly five weeks, the leucocyte count was not above normal, probably a leucocytosis did not exist during the active disease. The pneumonia occurred in a hearty boy, of eleven years, and was secondary to grippe. It came on insidiously, first the disease seemed on the right side, then on the left, and for a day or two both sides were affected; it finally settled on the right side at the base of the lung. The fever, cough, and expectoration subsided during the second week. Percussion dulness, and absence of breath-sounds continued, gradually clearing up in front, but persisting behind, below scapula, and in the axillary line. There were infrequent but very severe spells of coughing, little or no expectoration, sweats during sleep, day and night, temperature ranging from 99 to 101°F., malaise, anorexia, etc. Improvement was slow, and not until the end of the fifth week was the lung free, the temperature normal, and the general symptoms favorable. The absence of a hyperleucocytosis in this case was regarded as a favorable sign. Resolution may be delayed from several weeks to several months. I recall an instance in which four months expired before resolution was complete. It occurred in a woman, past middle life, who had pneumonia, complicating grippe. She had exophthalmus—at least the goitre, palpitation, and rapid pulse—what influence this may have had in delaying resolution I am unable to say. I greatly feared that I was dealing with a tubercular trouble, when the lung began to clear, the fever and sweats subsided, and the patient made a complete recovery, and has remained well since, now over two years. In conclusion: We shall pronounce our cases of pneumonia "well" when resolution is complete; and the completion of resolution is to be determined only by the local physical signs, and the careful use of the thermometer, and possibly by the blood conditions as negative evidence.

The Object of Treatment.

By Edward R. Snader, M.D., Philadelphia, Pa.

The object of treatment in pneumonia is obviously to secure the recovery of the patient. This trite proposition, however obvious, does not comprehend the question of the object of treatment in its entirety. The ultimate object—the recovery of the patient—may, in the course of the malady, necessitate the change of object many times; in other words, with the varying phases may vary the special object repeatedly with the intent of securing the ultimate object. At the very onset of the disease one must "take account of stock," *i.e.*, thoroughly estimate the constitutional resistance of the individual attacked, his prior history, his environment, emotional, hygienic, idiosyncratic, and, above all, the state of the heart, the lungs, the brain, the kidneys, the alimentary canal, the cutaneous sewers, and central nervous system. Pneumonia, even if it be not an infectious disease (and I verily believe it is), must be viewed as capable of attacking and crippling any or all the nobler organs of the body, not only by virtue of its essential nature, but also by reason of the mechanical action and reaction of certain of the ordinary phenomena of the disease, as fever, blood contamination, imperfect anabolism, kololism, pulmonary back-wash (tissue change), etc. When we have grasped the disease situation, in a case of pneumonia, we are ready, and never until then, to consider the problem of the object of treatment. Logically, we should kill the cause. Practically, we cannot kill the cause without killing the patient. Even were we able to attack the diplococcus pneumoniæ specifically and separately, the problem would not be settled; for it has been sufficiently demonstrated that other micro-organisms than the one recently supposed to be specifically causative of pneumonia can also cause all the typical phenomena of the affection. If, then, we cannot annihilate the micro-organic cause, and cannot govern the genesis of the germ, we naturally fall to making it an object of treatment to modify the results of germ activity, and the soil which they occupy. So far as the local condition in the lung, it may become the object of treatment: (1) To modify the amount of blood going to the already congested area, in order to limit the amount of subsequent consolidation and its train of mechanical consequences; (2) to liquefy the tough adhesive inflammatory products, in order to lessen severe cough and its consequent increase in pulmonary pressure and sequential back-pressure on the heart; (3) to remove, speedily, products of inflammation from the air-cells and bronchi; (4) to prevent

extension to uninvaded lung territory; (5) to prevent embolism, suppuration, abscess, gangrene, pulmonary fibrosis, extensive secondary pleurisy; (6) to overcome chest-wall paresis; (7) to prevent pulmonary œdema. All these objects are reasonably within the control of a wide-awake therapeutist. In a general sense, there are times when the local condition in the lungs is no object of treatment at all, for the general state of the patient becomes the key to the situation. The lung condition may predominate, and directly as well as mechanically be of paramount importance, or, again, kidney inactivity, or high temperature, or cerebral complications, the typhoid state, or more especially the heart or lungs, may present practically, for the time being at least, the only legitimate object of treatment. To my mind, at least, it is simply criminal to attempt to treat a case of pneumonia without a distinct, clear-cut conception of what is expected to be wrought by any procedure instituted, medicinal, or otherwise. There must be no haphazard work. The object of treatment is to secure the recovery of the patient, but the object of treatment to secure the ultimate end may be kaleidoscopic in its protean changes until that favorable end is secured. Individualization is the key-note.

The Place of Homœopathic Remedies in the Treatment of Pneumonia.

By J. B. Gregg Custis, M.D., Washington, D.C.

If there is one disease in which Homœopathy can be put to a test with an opportunity for showing its real worth, I believe, it is pneumonia. The special etiology of the disease has changed absolutely since most of us occupied seats in college, but the symptomatology has not changed at all. The patient suffers with the same pains; we look for the same characteristic symptoms now as we did then. There is one other thing which has not changed since we left college, the symptomatology of our remedies. The symptomatology of our remedies is, in fact, all that we can use to-day of what we were taught in New York. Our methods of investigation, our ideas concerning the value of the methods have changed, but neither the subjective symptoms of the patient, nor the symptomatology of our remedies has altered. Therefore, we have no reason to change our methods in determining remedies, especially if we use the valuable experience of the leaders of Homœopathy.

The method employed in the treatment of pneumonia by the homœopathic physician depends entirely upon his own peculiar characteristics. Some of my friends use the pain as an indication for the remedy, others use the appearance of the sputa, and still others the complications present as an indication for the drug chosen. It makes but little difference what method is employed so long as the patient is prescribed for and not the disease. None of the symptoms which make the diagnosis of the disease are of much value in making the prognosis.

We might take as a text when treating this subject, "experience versus theory." We admit all the theories that have been advanced as to the cause of the disease, the cause of the crisis, but we are not at all satisfied with the results attained by those who treat either on a physiological or a pathological basis; certainly we should not be when we have indisputable records of the experience of those most advanced in our art, of those who have used the subjective symptoms of the patients and the complications of the disease as their guides in prescribing. We are not justified in throwing aside that experience, or in ignoring their records, because of the scientific investigations of to-day. Remember that true scientific etiology and pathology must be in harmony with all the laws of nature. In no way do they effect a prescription based on natural law.

Failing Heart of Pneumonia.

By O. S. Haines, M.D., Philadelphia, Pa.

I have been chosen by our Chairman to open the discussion upon paragraph 47, which, according to our schedule, relates chiefly to the treatment of the failing heart in pneumonia. Now I can see no reason why the homœopathic physician should not include this complication, if it be present, in his clinical picture of the given case, and prescribe according to his usual method; that is, give to such a case its "similimum."

That the similimum sometimes overcomes the condition of cardiac weakness no one can deny. But, that we occasionally have a case in which we cannot observe improvement after such a prescription it were likewise folly to deny. In such a case there must be reasons for the failure of the potentized drug to act. What those reasons are I trust will be brought out in the discussion. Such a case seems to demand *special* treatment, directed either to the heart weakness or to the cause of the heart weakness. I feel that we must include in our discussion of this subject, the Causes and Nature of Heart Failure in Pneumonia also, so far as we understand them. Cannot someone shed some light upon this portion of the subject? The changes which take place in the lung tissues from the very beginning of a pneumonia all tend to obstruction of the pulmonary circulation. From the beginning, then, we must admit that the work of the right heart is greatly increased; and it is a question whether the reserve power of this side of the heart is much. I do not think it has the power to rise quickly to a serious emergency, and to overcome pulmonary obstruction that is great or long continued, even should the heart have been healthy at the beginning of the attack. How much sooner will it succumb to the strain if the organ should have been the seat of valvular disease, or if the patient should have been the subject of any chronic disease, or even acute disease marked by muscular weakness of the whole system, in which, of course, the heart will have participated. I do not believe that we attach enough importance to the work performed by the right side of the heart in a serious case of pneumonia. Surely the cause of many deaths is simply that the right heart fails to overcome the obstruction within the lungs, and thus fails to sustain the pulmonary circulation.

We are to be on the lookout for this danger. It can be foretold.

The heart-sounds are clear in pneumonia if all is going well. The left ventricle contracts vigorously, the pulmonary second-sound is clear

and distinct—even accentuated. But if the right heart is failing, then the second-sound becomes less distinct. We may perhaps notice fulness of the veins of the neck, or epigastric pulsation. We may see these things if we are looking out for them.

Well, then, here is the present situation. The muscular power of the right side of the heart is exhausted, there is venous congestion everywhere, but the arteries do not contain enough blood, and perhaps at this time are contracted.

The treatment of this variety of cardiac failure, it seems to me from what experience I have had, should consist in the administration of whiskey and Nitro-glycerine. Both these drugs tend to dilate the arterial system, thus relieving the venous side of the circulation, and reducing the labor of the right side of the heart. This combination of medicaments we administer in increasing doses until the effect desired is manifest, then we continue that dose at regular intervals until all danger is past. The initial dose of whiskey is one drachm, increased until the desired effect is obtained; the initial dose of Nitro-glycerine is one drop of a first centesimal solution, freshly prepared, increased until effect desired is apparent.

Aside from these two remedies I have seen Phosphorus produce results that could not be denied, and Oxygen has served me so well that I consider it a trusty ally and always use it in this condition. The greater the cyanosis of the lips, etc., the more it is indicated. But we must not be "stingy" with the Oxygen. Large cylinders, under moderate pressure, and a goodly number of them, are required in some cases. If we give Oxygen or the mixed gases, they should be given liberally and frequently.

Now what shall be said of those cases of cardiac failure in pneumonia that do not apparently come under this category; cases in which we do *not* see the evidences of marked pulmonary obstruction and impending incompetence of the right side of the heart as just described? I am sure we see such cases.

Take a case, for instance, in which there is no venous congestion, in which the radial pulse is intermittent and feeble, in which the first sound is indistinct, in which the lower portions of the body are becoming cool, in which the breathing is becoming shallow, in which we cannot find extensive consolidation. What is this condition? A general systemic collapse? I have seen Strophanthus tincture improve this condition quickly. I do not now refer to the systemic depression sometimes witnessed at or near the time of the crisis, in cases terminating by crisis.

Patients whose whole systems have been undermined by previous excessive and habitual indulgences in alcoholic beverages, are in my experience very apt to manifest serious forms of cardiac weakness during pneumonia, even when their attack does not otherwise appear to be of a grave degree of severity. It has been my custom, then, always to ask of a patient suffering from pneumonia, how much liquor per diem he has been in the habit of using. If he has been addicted,

I then allow him whiskey from the beginning. It is a bad time to ask a man to cease his accustomed liquor.

In conclusion, for the President is holding a stop-watch on us to-day, and my time is up, let me add just a word of praise for that splendid remedy Strychnia. How could we get along without it in the cardiac failure of this and other diseases? How often has it warded off the Death Angel? But it must be given in time; we possess no cure for death.

The Real Value of External Applications in Treatment. Are They ever Called for? What are Their Indications and Contra-indications?

By Joseph M. Reeves, M.D., Philadelphia, Pa.

When we consider that pneumonia is one of the oldest diseases known to the medical writers, and the knowledge of the fact that all agree as to its pathology, makes it phenomenal that such a diversity of view should exist as to the external treatment of it; and this, too, seems largely present among the members of the old-school practice, possibly because the Homœopaths in so many, or, indeed, in all, instances denounce all forms of external application as heretical and never to be used, nor, indeed, even considered for a moment. Now, this idea, it seems to me, should not exist among medical men who are supposed to possess broad minds, and to be well read in the literature of the day. Any man who has never tried an external application in pneumonia is not qualified to pass an opinion as to its efficiency, any more than the man who has never used antitoxin and gives his opinion on its value in diphtheria. I am quite positive, were Hahnemann present to-day, he would not object to the use of that agent which will relieve or cure, though it may be an external application; for, from this very fact of trying something more than the known methods of practice, caused him to open to the world our great system of therapeutics; but these different opinions do exist, however, and I will show how varied they are.

In going over the literature at my command, I find the application of ice to have the greatest number of adherents. The ice-bag placed over the affected part of the lung hinders the inflammatory process, it is claimed, disperses the exudation which occurs prior to the application, prevents engorgement, reduces the temperature, etc.; this, at least, would be a theory, and there are many eminent men to endorse it and show good practical results from their method of treatment, and hence it must have, of necessity, credit given it.

Cold sponging, tub and tepid bathing likewise have a goodly number of believers. Jurgensen's method being to keep down the pyrexia which leads to cardiac failure, so he gives the patient a bath in cold water, or cold sponges freely used, and administers heart tonics, and by this method is said to have reduced the mortality fifty per cent.

Now this is certainly a matter worth while studying, when coming from such an eminent source; but, as Wilson says, it has never become a well-established method, possibly owing to the fact of its being

inconvenient and annoying to the patient and objectionable to the people.

Cupping and bleeding, much used in by-gone days to relieve pain and influence the inflammatory process, is now mostly laid on the shelf for better methods, fortunately for the patient, although in so late a work as Wood and Fitz, venesection and dry cupping are advised to lessen engorgement of the lungs and final area of consolidation.

Blistering, to hasten resolution, has likewise had its day, yet one writer says that in a large majority of cases the blister has specific effects to arrest congestion and prevent the sad consequences of hepatization.

Mustard plasters to relieve pain are occasionally used. Turpentine also comes in for its share of praise as a counter-irritant, as well as cotton-batting to keep in the moisture, wrapped around the chest and retained until after resolution has taken place.

But I must endorse, from a personal knowledge, both in hospital and private practice, the use of hot fomentations in all cases of pneumonia. I apply it as soon as my diagnosis is made, and when the pain and dyspnœa are observed, and let me add, I have never any cause to regret its use. I might say here, too, it is remarkable how satisfactory it is to the relatives of the patients to know you are using poultices, for it seems almost no one is surprised when they are suggested. I prefer flax-seed, because they can be made light and they retain the heat a long time; linseed is likewise good. They are put over the chest, front and back, and covered with oiled silk, or, as we frequently use in the hospital, oiled paper, much cheaper and equally efficacious; the poultices are changed every three hours, day and night, very carefully covering the patient while the change is being made. The poultices are continued until the lung is cleared, and it affords the most wonderful relief of any measure I have ever used.

I cannot discuss the question of ice or bathing processes, with neither of which have I any personal knowledge, but I am quite satisfied with the old-fashioned, time-honored remedy, its action being, theoretically, a relaxing of the capillaries of the skin by the irritation of their heat, sending the blood to the surface it becomes a mild counter-irritant, and the practical results satisfactory. Of course, I use the internal remedies as well, which I consider are in no way whatever affected by the use of the poultice, nor do I believe anyone can show such to be the case.

Experience is a good teacher, and when your results are good and satisfactory, is it not wisdom to continue them? I therefore say, poultice all your cases of pneumonia, catarrhal and croupous alike, thereby giving your patient better breathing, ease, and comfort, which will positively come, I can assure you. I know of no contra-indications.

DISCUSSION.

R. LUDLAM, M.D., Chicago, Ill.: I have listened to these papers with a great deal of interest and profit, but nothing at all has been said of women having pneumonia; and since I do not deal with men when they are ill, I do not see why I am called upon to say anything.

I had some little experience with that subject brought out in the last paper many years ago, when I was first called in consultation in a very bad case of croup. I said: "You are doing very well, but there is a troublesome aunt around, and I tell you, you must keep that old woman away and apply hot applications to her throat every ten minutes for twenty-four hours, and that will keep her still."

T. L. HAZARD, M.D., Iowa City, Ia.: I wish very briefly to speak of the etiology of pneumonia, and will confine my remarks to a certain case which occurred in my practice.

The case in question was that of a hearty child about two years old, who was taken suddenly ill the latter part of last February. While out-doors he had fallen and had apparently received a slight injury. On being examined after the fall, no evidence of injury could be found except a little blood in his mouth. He complained of severe pain in the lower part of his chest, which was greatly aggravated by stooping. Later the only position in which he could be at all comfortable was lying on his back across his mother's breast.

Before his fall he had had a hat-pin in his hand and, although diligent search was made, it could not be found. I believed he had swallowed the hat-pin. After several weeks of ineffectual treatment, the parents were induced to go to Davenport and have the child examined by the X-rays. The result was negative.

Eight weeks after the injury an intense attack of gastritis came on. This lasted four days and was followed a week later by pneumonia involving the entire left lung. He died of hemorrhage about fourteen weeks after the injury. Five physicians and surgeons had been called in consultation, but the evidence of the pin being in the stomach was not sufficient to induce the parents to have an operation.

An autopsy was held, and this hat-pin (exhibiting pin), 5½ inches long, was found in the stomach, the head being downward and the point extending up the œsophagus and into the left lung, continually prodding it with every movement of the child. The reason the pin was not discovered by the X-rays was partially due to weakness of the apparatus and because the pin was in the shadow of the vertebræ. The pin is rusty. The boy might have been saved by an operation, or possibly by taking some drug which would oxidize the iron.

WILLIAM E. LEONARD, M.D., Minneapolis, Minn.: I live away up in the frigid zone. Up in Minnesota we have clear, fresh, pure air, and very little pneumonia; that is, very little croupous pneumonia.

That is my personal experience. I have seen comparatively little confirmation of, and cannot believe in, the modern bacteriological origin of pneumonia. It seems to me that the older views of the causes of pneumonia must be correct.

As to treatment, I want to endorse all that Dr. Custis said, and a great deal more. I have never had to go outside of homœopathic remedies to cure pneumonia; and the simple remedies and the poultices have always answered my purpose. I certainly believe in poultices, and, latterly, the cotton jacket, and find them entirely satisfactory. If this subject is confined strictly to croupous pneumonia, I have little to add from personal experience.

George Riley, M.D.: In regard to the termination of pneumonia, within the last week I have had a case terminate in the crisis that has had a good deal of interest. A girl, thirteen years of age, had been sick three or four days. The temperature was not high. I used hot applications and fixed the chest by putting bandages around the entire chest. About six o'clock they sent for me and said the child was having a severe hemorrhage. At 7.30 the temperature was 104¾° F., and the pulse was between 120 and 140. I instructed the nurse to watch for the hemorrhages and watch the pulse closely. I expected to be called in in a few hours, and became quite anxious and went down to see the patient at 7.30 and took the temperature, which was 97¾° F., which was seven degrees drop in twelve hours; and I was very much surprised to find her pulse 84. In this case no whiskey was given, and Thursday evening I left the patient in a very good condition. I believe that once in awhile we can use this remedy, but I do not believe we can get a good deal of benefit from stimulants.

E. B. Hooker, M.D., Hartford, Ct.: I was very much interested in this paper of Dr. Dowling's which I read. There are several points in it which strike me, and which I think will bear consideration. He says: "Pneumonic consolidation, by offering obstruction to the flow of blood, throws added work upon the right heart. The recoil of blood against the pulmonary valve cusps is therefore increased, and we find the second pulmonary sound gradually increasing in relative intensity until consolidation is completed." And he also says, "So long as the case is doing well the relative loudness of the pulmonary sound will be maintained. Whatever be the cause, whether toxæmia, high temperature, or obstruction, if the heart weaken, the prognosis becomes grave. And the first evidence of this weakness will be a slight decrease in the purity and loudness of the pulmonary sound. The untrained ear will not detect this, but it is tremendously important that the necessity for training the ear should be impressed upon all. But little practice on the healthy heart is needed to enable one to appreciate partially, at least, these variations of relative intensity of heart-sounds."

It is not an easy matter to distinguish between the part which the pulmonary valves and the aortic valves bear in this second sound.

Now, however valuable it may be to detect the very first signs of cardiac weakness, I submit to you that it will be exceedingly difficult for the most expert ear in existence to detect in a patient, with the clothing necessarily covering the chest, except a small opening, this failure of the pulmonary element in the second sound. I do not believe anyone can do it. We can detect that the second sound is not so snappy and not so acute as it was, but that the pulmonary element is decreasing in intensity, I very much doubt.

The important sign, the one at the bedside and not in the library, the significant sign, by which we can detect an approaching heart-failure, is the difference in the first sound, the muscular sound. The strain comes upon the right heart, and when heart-failure begins the whole heart is involved, and the muscular structure covering the left heart fails also. We are all familiar with this sound in health, and I think that its alternation will be one of the first reliable symptoms of approaching weakness of the heart.

Dr. Dowling finishes his paper by saying: "Another grave prognostic sign is the tendency to rapid pulse-rate on the least exertion, the pulse being only the usual rate while the patient is quiet. This is also an early symptom of approaching break-down, preceding the time when the pulse is unduly rapid. This should be at once the signal for the most stringent regulations as to avoidance of excitement, the admission of visitors, and the least exertion on the part of the patient. Failure to enforce such directions frequently results in the collapse of the heart, which has been considered as bearing its added burden reasonably well."

I submit to you, ladies and gentlemen, that pneumonia itself is the signal for doing all those things. One of the first directions I make (and I always make them in writing) is to put at the top that the patient must not sit up under any circumstances, nor exert himself in any way, however light the case, and that nothing must be done to put an additional strain upon the heart, which may subsequently become weak. It must be treated as if it were to be weak in the end.

As to external applications, I formerly used poultices altogether. I have gone West for one of the many good things that come out of this glorious section of our country. I have gone to Denver for a preparation called Antiphlogistine. Use a thin coating of this, and you need not change it more than once in twenty-four hours. You can keep it hot by using hot-water bags, and you will have everything you could gain from the poultices, without any of their disadvantages.

H. W. Pierson, M.D., Chicago, Ill.: In the discussion of this question, a foundation should be laid that has not been considered in any of the papers, and that is the rule that a healthy person, man or woman, seldom has pneumonia, and when thus diseased, will get well with little or no medicine, except that physiological rest which is so necessary. In every severe case of pneumonia you will find the previous history of the individual of greater importance than the simple

fact that you have a case of pneumonia, and when your knowledge of disease is sufficiently complete, you will find stronger indications for treatment in this greater totality than in the single fact that your patient has fever, rapid pulse, short, hurried breathing, etc., which are pathognomonic of inflammation of the lungs and valuable as diagnostic points, but furnish no indications for treatment.

In your study, the peculiarities of the disease will be the most important indications for your treatment; and so you may go through the entire category, but in every case you must treat the individual independent of the inflammation, wherever it may be located.

I believe another thing might be criticised very severely, and that is that we do over-treat instead of under-treat our sick; that we watch for things or anticipate things, or assume responsibility over nature, and by so doing get many complications that would not otherwise exist.

CHARLES GATCHELL, M.D., Chicago, Ill.: Question number 16, as indicated, applies to early diagnosis between fibrous pneumonia and catarrhal pneumonia. It implies that the general symptoms of the case are not such as to make the differential diagnosis clear. In such cases I find it necessary to resort to the examination of the blood, which in all cases gives definite information, in the degree of leucocytosis that exists. If there is a high degree of leucocytosis, then, as between catarrhal pneumonia and croupous pneumonia, the diagnosis would be in favor of the latter disease. Indeed, it would be positive, if in the former the presence of suppuration in any part of the body could be excluded.

Question number 22—"Can a pleuritic friction and a pneumonic crepitant râle be differentiated where both exist in the same locality?"—is another one which interests me. The distinction suggested is a very fine one to make, but, since it is a condition that may present itself in any case of pleuro-pneumonia, it is of practical importance. My method in such cases is to have the patient take a deep inspiration—as deep as possible. This will cause him to cough, and, as a result, the sound of the râles will become temporarily modified. Now examine for the friction fremitus due to the roughened pleural surfaces. If still present as before, the diagnosis is made. If the chest-walls are thin, the friction may be detected by palpation.

There is one subject in connection with the treatment of pneumonia that has not yet been touched upon, which I think is of more than ordinary importance. I refer to the state of the bowels. This matter should receive careful attention, since an overloaded lower bowel can cause a depression of the heart's action that may determine a fatal issue in a case.

CHARLES E. WALTON, M.D., Cincinnati, O.: In regard to the paper which I read, I want to say that the best place for the poultice is in the swill barrel. It will make the cows give more milk. Poultices

have done more damage than the knife has been able to correct. If you are going to put on something that will take the place of the poultice, which only furnishes heat and moisture, use absorbent cotton, and dip it in hot water. The poultice, in my estimation, is a dangerous thing to use, for the simple reason that it gives more aggravation than it has ever done good. You can change it every few hours. Let the poultice become cold, and it is like a cold pancake, and it is disagreeable to all connected with it.

PEMBERTON DUDLEY, M.D., Philadelphia, Pa.: The proper time to cure pneumonia is in the first stage—at its beginning. The doctrine applies, indeed, to many other diseases. Get the best of it at the beginning. The amount and intensity of the hyperæmia, and the intensity of the lung congestion at the beginning, have much influence in determining the extent of the pneumonic inflammation, as well as its intensity and the subsequent exudation. The more we can keep down the intensity of the first stage, the less difficulty we shall have in combating the subsequent stages. I am, therefore, always watchful that the patient's extremities at this stage be kept warm, and caution the patient's friends to examine the toes, heels, and ankles, and the knees and hands, which in many instances are found to be extremely cold. I insist on the application of heat externally, not of hot bricks or hot irons or hot bottles (these are inefficient at best), but hot water applied directly to the skin. The patient should not be lifted from the bed, or set up, but it should be applied while the patient is lying down. Cloths are wrung out of hot water in which there is an abundance of mustard. The mustard is used because its presence in the pores of the skin will maintain the glow and prevent subsequent cooling. I also use the mustard jacket to aid in keeping the blood at the surface of the chest-walls, as well as to mitigate the pain attendant on the act of inspiration.

CHARLES E. FISHER, M.D., Chicago, Ill.: By having been asked to read Dr. Haines's paper it would seem almost to put in my mouth words advocating the use of alcohol and other stimulants. In the Southwest we had a good deal of pneumonia, and it was not limited to the catarrhal variety either, but I have not seen any benefit derived from the use of alcohol. On the contrary, I have seen harm and have regretted that it was used. It is like whipping a tired horse when he already has a full load.

In regard to the poultice, it has no proper place in the treatment of pneumonia. Why? Because in pneumonia, more than in any other disease, we need the respiratory function of the skin. We all know that that respiratory function amounts to about twenty per cent. of that of the lungs. We cannot get all of this if the chest is partially covered with a poultice. Strapping is valuable in pronounced pleurisy, but without pleurisy I cannot see where any benefit can be expected from it.

H. C. ALLEN, M.D.: I want to add my experience to what Dr. Walton and Dr. Fisher have said in regard to the treatment of pneumonia, and perhaps I may advance something that you may have heard somewhere else; "For heaven's sake," let us stop treating pneumonia, and treat patients.

The poultice I would not place in the swill-barrel, but I would put it on the meddlesome nurse or meddlesome friends. It will do the patient more good.

If we have an inflammation of the mammary glands, the more poultices you put on the more you hasten suppuration; just the thing you are trying to prevent. It is the worst practice we can be guilty of. Let the skin alone, and keep the pores open to help the lungs do their work. They need all the help they can get.

C. B. KINYON, M.D., Ann Arbor, Mich.: I saw over 3,000 cases of pneumonia in the Mississippi Valley, where I practised for twenty years. There were 10,000 persons working in the factories, and these were strong, vigorous men. They were overheated, and the location was such that the wind, blowing down the sluice-way, between the hills on each side of the river, would give these men a chill, and unless something was done immediately we had on our hands a case of the first stage of pneumonia. We instructed our men that they must not go out of the shop without putting on heavy clothing, and keeping their wrists, ankles, and neck well protected. After the exposure we kept these parts warm by hot-water applications to equalize the circulation and bring about a healthy reaction and nip the attack in the bud.

F. J. BOUTIN, M.D., Independence, Mo.: In regard to poultices, I would like to say that the moisture tends to relieve that high temperature. If you do not like the wet flaxseed and are worried lest it may harbor microbes, when the dry meal was recently wet with clean water, you may use clean towels or absorbent cotton wet with clean water, changed as often as they become dry. If there be no pain it is not necessary that the poultice be especially hot, but the continuous application of moisture to the skin tends to relieve the internal congestion and lower the temperature. If there is acute pain, it can be markedly relieved by moist hot applications over the seat of the pain, and the compresses may be kept hot or reheated without changing by holding some hot object, as a hot-water bag or a hot iron, against them. The relief from pain is certainly very desirable, and I am sure it is much safer gained in this way than by morphia. Someone was talking about these poultices becoming cold, and how disagreeable they then were. If you put a poultice on a hot stove you would not worry about its becoming cold while there was fire in the stove. A poultice on the chest in pneumonia will not become cold as long as the fever and inflammation continue. When that is gone, there is no further use for the poultice. Someone advised covering the chest with dry cotton-

batting. I see no benefit whatever in that. If the patient is cold, put on him an extra flannel shirt or more flannel blankets and covers; but the fever usually makes him warm enough, and dry heat only increases his discomfort. From my experience, I am still of the opinion that external application of moisture is a beneficial measure in the treatment of cases of pneumonia.

T. C. DUNCAN, M.D., Chicago, Ill.: I think the first thing we want to do is to differentiate whether we have catarrhal pneumonia or a true lobar pneumonia. The diagnostic points with me are that the catarrhal pneumonia commences with a cold, and then you have the disease travelling down as a bronchitis, capillary bronchitis, and finally pneumonia.

The pleuro-pneumonia, true pneumonia, begins always with a chill; and then we have not a simple disease, but a complicated case. The inflammation of the lungs and liver, if on the right side (lower lobe) or on the left side, it may involve the heart pleura, making a more complicated and serious disease.

We know that the remedies for the different stages of these two diseases are different. The remedies for the typical stages of lobar pneumonia are Aconite, Byronia, and Phosphorus. The cases where Phosphorus alone has cured were lobular or catarrhal pneumonia.

Now there is one point that has not been mentioned. If we have so much inflammation down in the region of the diaphragm, we cannot put much food into the stomach without having the heart and circulation disturbed by pressure and the evolution of gases; and therefore the systemic attention given to the heart necessitates a considerable drain from other parts of the body. As nourishment, I prefer beef extract—albuminous food—and little of that.

As far as local applications are concerned, I think one great danger is the chilling of the surface and thus increasing the inflammation from exposure necessary in changing a poultice or other application. We can use the hot-water bottle outside of the clothing. It answers all purposes, according to my experience.

J. B. GREGG CUSTIS, M.D., Washington, D. C.: The speaker who preceded me tells us that the symptoms change hourly, certainly daily, and that we must be prepared for anything. We are certainly prepared for any change if we have a complete knowledge of our Materia Medica.

We all do group in our minds certain remedies with certain diseased conditions, but this in no way interferes with the careful differentiation of these remedies. My own method of prescribing is a combination of the three I have already referred to: the pain, complications, and also the character of the expectoration. If you cover the three, you can be sure that you have the right remedy in a given case.

Keep above temptation. Don't use morphia or any of the new preparations for the alleviation of pain, because the result will certainly be disastrous. We have had numerous examples of this in Wash-

ington. Many public men who from their habits are intolerant of pain, or of delay in its relief, have fallen victims to the so-called rational method. Many physicians yield to their entreaties, and the result is either immediately fatal because of heart-failure, or the symptoms are so covered that, it being impossible to make a careful prescription, the disease runs its course unchanged, proving that the physician or attendant in that particular case has been, so far as the cure is concerned, which should be his chief aim, valueless to the family.

ELDRIDGE C. PRICE, M.D., Baltimore, Md.: The ground has been well covered, and among others one or two points especially have struck me. One is this: In treating pneumonia, the principles upon which our therapeutics are based are the homœopathic principle and the allopathic principle. This fact has been brought out here to-day. The poultice illustrates the application of allopathy. Some circumstances would justify treatment in this way. I do not use the poultice, however, but I would not throw it into the swill-barrel. I believe in some cases it is a fine thing. However, in cases requiring revulsive means I use Stokes's liniment—egg and turpentine—until the acute condition is over; then I do not use it any longer. This is distinctly a Baltimore remedy. It is applied on cotton or flannel under the oil-silk jacket, merely for temporary relief. You do not have a chill resulting, which sometimes occurs from the poultice. I do not think the functions of the skin are interfered with to any great extent by the use of Stokes's liniment, because the skin is already hot and dry and its secretory and excretory functions are suspended.

There is another point—the bowels. Where pneumonia patients have a proper and simple diet—and I think diet is a very important matter—the bulk of the food given should be such as will be readily absorbed. If there is any fecal accumulation in the beginning, the intestines should be unloaded, but afterward you need not bother about it. If the proper homœopathic remedy is given the bowels will take care of themselves.

In the case of a weak heart, I have never seen the following idea suggested; it applies not only in the case of pneumonic weak heart, but in the examination of all cases of heart disease: Have the patient fully inflate the lungs, and then as fully empty them by forcible exhalation. In this partially collapsed condition the heart is brought nearer to the examiner's ear, and sounds which ordinarily are indistinct become clear and definite. The patient may not always find it easy to accomplish this feat in pneumonia, but under ordinary circumstances it can be readily accomplished, and is often a great aid to the diagnostician.

S. P. HEDGES, M.D., Chicago, Ill.: I have had some experience with pneumonia, and I have had no occasion to go outside the homœopathic remedies in my cases, and I believe that the more accurate our first prescription is made and the more completely we take the condi-

tion of our patients, the better results we have, and that the time to do this is the inception of the case—at the beginning.

In regard to heart stimulants, I have used those which have been mentioned here, but seldom use them. I have had a few cases in which I felt myself forced to the use of these remedies; but I used them hypodermically because I could not give relief by mouth. I think they have their place and should be used in a minimum number of cases. If we take care to select our remedies in the beginning, we will have less trouble in heart complications, unless it is those cases which are naturally troubled in that way.

I began my practice with free use of the poultice, and was so educated in a homœopathic college. I have seen no reason to change my plan. I can say that, in regard to the effect of poultices, they are uniformly acceptable to the patient. I have had no experience with the use of ice. Local applications I have uniformly used with the bandage.

A. C. HALPHIDE, M.D., Chicago, Ill.: Pneumonias due to infection, and most lobar or common pneumonias are caused by infection, respond to the indicated remedy just as well as cases due to other causes. The remedy works just as well and in the same way in one class as it does in the other. In my judgment, the cure is effected in all cases by bringing the system up to a point where nature can throw off the acting causes and overcome the effects of the disease. The drug does not cure the disease, strictly speaking; at most, it only aids nature by stimulating and strengthening the cells of the tissues, so that she can correct the functional and organic derangements in the tissues and organs which constitute the disease. Any influence will accomplish the same result, be it mental or medical, if it helps and enables nature to overcome the causes and throw off the effects of the disease.

However, as a thorough knowledge of each case is necessary to attain that end, we undoubtedly make too little use of microscopic examinations in our cases of pneumonia, as well as in other diseases, in that we often fail to examine the sputa, blood, and urine, which afford much information as to the origin, intensity, and peculiarities of the disease. The sputa furnishes positive proof as to the character of the infection; the blood gives data as to the diagnosis and prognosis through the blood-picture under the microscope and the degree and character of the leucocytosis, and the urine marks the progress of the disease and points to its probable termination.

Scientific medicine demands careful, intelligent investigations of all the data which bear upon the cause, course, and cure of diseases, and it hardly requires saying that the better we understand our cases in these respects, the better we shall be able to select the remedies and care for them.

The Heart in Croupous Pneumonia.

By J. W. Dowling, M.D., Professor of Theory and Practice of Medicine. New York Homœopathic Medical College and Hospital.

Croupous pneumonia is under all circumstances a treacherous disease. No case is out of danger until the crisis has been safely passed and convalescence established. The doctor who allows himself to be too confident of recovery because the patient is doing so well, frequently reckons without his host, and experiences a crushing disappointment. He pays careful attention to the temperature, the respiration, the expectoration, both quality and amount, to the cough and to the pulse, noting carefully its number of beats per minute, perhaps being satisfied with the record made by the nurse before his arrival. He finds the temperature not high, respiration, perhaps, not more than 40, cough easy, pulse perhaps 110 or 115, and in his over confidence proclaims that all is well and that the case will recover. He is called hurriedly, perhaps that night, and arrives only to find the patient dying or dead, a victim of sudden paralysis of the heart. The explanation to the family can be but a lame one: An unforeseen collapse, a visitation of Providence, but the family in many cases do not agree with him, and consider that he should have been able to give them reasonable warning of the impending result—and they are right. He should be able, and had he watched the heart of the patient with the same care that he recorded the temperature he would have been able to foresee the approaching breakdown. The heart is the barometer of croupous pneumonia, and the indications, if intelligently read, are full of promise, either of good or ill to the patient. It is true the pulse is, as it were, the indicator of this barometer, but the pulse alone tells of cardiac breakdown only after it has become well-marked. It is easy to recognize by the pulse that a heart *has* failed. To determine that it is about to fail, and with this knowledge to be able to fight against failure, can only be done satisfactorily by means of the stethoscope, supplemented by percussion to determine a change in area, due to weakening of muscular walls, with consequent stretching and dilatation. It will then be more in accordance with facts to discuss, first the modifications of the heart sounds, and afterward the significance of pulse change, both as to rapidity, volume, and rhythm.

Pneumonic consolidation, by offering obstruction to the flow of blood, throws added work upon the right heart. The recoil of blood against the pulmonary valve cusps is, therefore, increased, and we find the second pulmonary sound gradually increasing in relative intensity,

until consolidation is completed. This accentuation is very marked. The pulmonary sound is loud and ringing, while by comparison the aortic sound is distant and feeble, though itself usually increased over the normal, due to the febrile excitement of the heart as a whole. This state of affairs being established, as it is in every typical case of croupous pneumonia, the wise man, though he feel the patient's pulse, listens carefully to the aortic and pulmonary sounds at each visit. So long as the case is doing well the relative loudness of the pulmonary sound will be maintained. Whatever be the cause, whether toxæmia, high temperature, or obstruction, if the heart weaken, the prognosis becomes grave. And the first evidence of this weakness will be a slight decrease in the purity and loudness of the pulmonary sound. The untrained ear will not detect this, but it is so tremendously important that the necessity for training the ear should be impressed upon all. But a little practice on the healthy heart is needed to enable one to appreciate, partially, at least, these variations of relative intensity of heart sounds. It is well understood that in pneumonia the heart fails rapidly when once it begins to go. How vital then to detect this first signal of danger, in railroad parlance, "the distant signal," meaning trouble ahead. It may appear as early as the second or third day, usually in old people and in alcoholics, and may thereafter become evident at any time until well on to convalescence. It should, therefore, be watched for, carefully and repeatedly. Its discovery means the immediate employment of therapeutic measures not necessary to here enumerate.

The next manifestation of cardiac failure is the weakening of the first sound, that produced by the muscular contraction of the ventricular walls, and the "slam" of the mitral valve cusps. These two signs always occur together, the former always a little earlier and more pronounced. Now comes the first change in the rapidity of the pulse, an increase, slight or marked. The rule holds good, "a failing heart gives a rapid pulse," but the diagnostic value of the sounds, over rapidity, depends upon the fact that the heart about to fail, *i.e.*, getting ready to do so, does not necessarily increase its rapidity at once. It takes time to develop this feature, and in treating pneumonia time is immensely valuable. Of course the increase is at once noticed, and the doctor begins to be anxious. If he does listen intelligently to the heart sounds, his fears are more than confirmed. If not, he begins at once treatment that should have had twelve, twenty-four, or thirty-six hours' trial. But it is easier to arrest a downward movement at its inception than after momentum has been acquired, and the doctor often finds to his sorrow that the rapid pulse loses its volume and tension, and that the dreaded intermissions begin to occur, finally all semblance of rhythm being lost, and there is a fight to determine how great a quantity of stimulants can be administered to keep going a heart that has lost all semblance of tone and ability to pull itself together, death putting an end to the struggle. Some cases such as this are saved. True, but with proper watching and early detection of in-

dications already mentioned, they need never have started on this downward path. It is not contended, as might appear, that all cases can be saved, but that many need not be allowed to get beyond control.

Another grave prognostic sign is a tendency to rapid pulse-rate on the least exertion, the pulse being only the usual rate while the patient is quiet. This is also an early symptom of approaching breakdown, preceding the time when the pulse is unduly rapid. This should be at once the signal for the most stringent regulations as to avoidance of excitement, the admission of visitors, and the least exertion on the part of the patient. Failure to enforce such directions frequently results in the collapse of a heart which has been considered as bearing its added burden reasonably well.

In conclusion it may be said that we would save more cases of pneumonia if we would watch more carefully, and perhaps more intelligently, that vital organ, the heart, which in this disease more than in most others is directly exposed to violent and long continued over-exertion.

The Action of the Antitoxins in the Prevention and Cure of Disease.

By Charles Gatchell, M.D., Chicago, Ill.

There is but one reason for the existence of the homœopathic school as a separate and distinct organization, apart from the great body of medicine. The one reason is expressed in the single word Similia. Eventually—to the satisfaction of the world—we must establish the truth of the proposition so expressed or history will fail to do us justice and the labors of a century will be lost.

Already much has been accomplished in this great work. All the active medicinal substances known to the pharmacopœia have been "proved," as we term it, and given place as curative agents, to be applied according to Similia. This labor, in the past, has all been performed by the school of medicine to which we claim allegiance. While we have been engaged in this work the older school, destitute of a fixed principle, has been making random experiments, with but meagre results. This has been true in the past, but at the present time they are engaged in the development of therapeutic methods which may well challenge our attention, since they promise to have an enduring place in medicine, and, also, because they are in the line of the principle which forms the basis of homœopathic therapeutics.

Hahnemann was quick to recognize the relation of serum-therapy to the therapeutic method which he did so much to establish. In 1799, just three years after the appearance of Jenner's "Inquiry Into the Effects of the Variola Vaccina," Hahnemann wrote: "It is only in accordance with my well-known maxim (the new principle) that small-pox, to give one example among many, has an important prophylactic in the cow-pox."

It has always been to me a matter of wonder that our school has not, as one of its tenets, accepted and promulgated the doctrine thus early announced by Hahnemann, that the prophylactic action of vaccine virus in variola is but an exemplification of the law of Similia. Even the members of the dominant school have been quicker to see this than have we.

The Regius Professor of Surgery at Cambridge, Sir George Humphrey, in an address before the Oxford Medical Society, October, 1895, said: "I have often wondered that the advocates of Similia Similibus, in their vain endeavors to find some reasonable ground for their theory, did not alight upon or make more of the practice and results of vaccination, coupled with those of inoculation. Here was to hand

the unmistakable evidence of a disease being hindered or prevented or stopped by the modification—by the like, that is to say—of that which caused it. Prevention and cure are near allies, and was it not possible—indeed, probable—that cure might be effected by means like those which staved off the disease?"

An English physician of the older school, Dr. Wiglesworth (*British Medical Journal*, January 29, 1898), asks: "What about the new serum treatment? Does it not savor of Similia Similibus Curantur?"

Instances of this kind could be multiplied.

Owing to the present activity of the older school in the development of a system of serum-therapy, involving the prevention and cure of disease by the action of the antitoxins, we, as a school, are now brought face to face with this problem. It is for us to determine whether we shall accept or reject. It is for us to examine these methods in the light of their relation to Homœopathy.

It is for the purpose of bringing this important subject for consideration before the American Institute of Homœopathy that this discussion is opened.

In order to present the matter in an orderly manner, I submit the following:

Proposition.—The therapeutic action of the antitoxins is an exemplification of the homœopathic law of cure; it is an instance of the application of a medicinal substance to the cure of disease according to the indications of Similia.

In support of this I would present the following ascertained facts:

Given in pathogenetic doses to the healthy subject, the antitoxins produce symptoms resembling those of the related diseased condition.

Proving.—A healthy man was injected with five cubic centimetres of diphtheria antitoxin for prophylactic purposes. Five days later he suffered from malaise, chilliness, and vertigo. He was faint and was put to bed. Chilliness and vertigo continued; vomiting occurred. There was great prostration, and œdema of the uvula and pharynx. Urine thick, high-colored, with almost complete suppression. Pulse rapid and irregular. At the end of the first day general glandular enlargement, which persisted ten days. Patient much prostrated and lost ten pounds in weight. Unable to resume work for a week. (*Boston Medical and Surgical Journal*, February 17, 1898; p. 156. Also, see *British Medical Journal*, May 5, 1896. Dr. Sevestre.)

Argument.—(a) The specific micro-organisms of diphtheria produce a poisonous substance—called "Toxin"—which is the disease-producing agent in diphtheria.

According to the experiments first made by Roux and Yersin, and since abundantly verified, it has been demonstrated that the disease-producing element in diphtheria is the diphtheria "toxin." It is supposed to be evolved by the bacilli as a product of their internal metabolism, and used as a protective against the attacks of the leucocytes. It may be likened to serpent-venom. It may be produced by culture methods, isolated, and its poisonous properties experimentally demon-

strated in the lower animals. By such methods it has been determined that it is the presence of this toxic substance in the system that gives rise to the symptoms of the disease, the fever, prostration, blood changes, cutaneous rash, nephritis, neuritis, and the entire list of symptoms going to make up the clinical picture which we recognize as diphtheria.

Toxin is thus known to be a most violent disease-producing agent. If in sufficient quantity, or if its action were not successfully resisted by the organism, aided by effective therapeutic measures, it would in all cases overwhelm the system, and death would invariably result.

(b) Toxin, by its presence in the tissues, exerts an influence which causes the production of a certain other substance, called "antitoxin."

As later demonstrated by Kitasato and Behring, followed by others, toxin causes the formation of a substance called "antitoxin."

Immense importance attaches to this newly discovered substance. It is known to be the agent which, primarily, exerts an influence on the system that enables it to resist the disease-producing effects of the toxin. Antitoxin possesses this power whether generated within the system of the patient or introduced from without.

Therefore, antitoxin is a curative agent, and as such does not differ essentially from other therapeutic agents or internal medicines which are introduced into the system for their curative effect.

The nature of this substance, and its mode of action in the system, are subjects vital to the present inquiry.

Antitoxin is contained in the serum of the blood of all patients suffering from diphtheria. It is also contained in the blood-serum of animals—preferably the horse—after treatments with graduated inoculations of toxin. The blood-serum, so procured, with its contained antitoxin, is the agent commonly used in the treatment of diphtheria.

As applied for therapeutic effect, I submit that antitoxin may be looked upon as being an agent similar in character to other medicinal substances, Aconite, Bryonia, Mercurius, Potash, Arsenicum, Lachesis, or any one in the long list. Like these, it is a substance which is introduced into the diseased system in order that it may exert its curative effect. As such agent, it has no peculiar properties; no action that is not common to all. It differs in no essential respect from the many familiar medicines that we are daily accustomed to use.

(c) Antitoxin does not act directly upon toxin to "antidote" or "neutralize" it.

There is abundant evidence going to show that antitoxin does not protect the system, or exert its curative effect, by direct action upon the toxin itself.

If a certain quantity of antitoxin would always directly neutralize a certain other definite quantity of toxin, then, as Ernst remarks, it would be possible with impunity to inject an animal with an indeterminate quantity of the mixture, providing the proportions of the two were uniform. But this is not the case. Large doses of the mixture invariably produce fatal results.

Prolonged contact of tetanus toxin with antitetanin does not destroy the toxin. (Buchner.)

The immunity to tetanus toxin persists even after the blood ceases to furnish antitetanin. (Behring and Schultz.)

The snake-venoms in their properties are analogous to the toxins. A mixture of antivenomous blood and snake-venom are harmless. But if the mixture be subjected to a temperature of 70° C., which destroys the antivenomous blood but does not destroy the venom, the mixture again becomes poisonous.

It may, therefore, be definitely accepted as a fact that antitoxin does not act directly upon the toxin.

Mode of Action of Antitoxin.—Antitoxin exerts its influence on the nuclei of the tissue-cells, stimulating them to renewed activity in the production of nuclein.

All evidence is in favor of the view, as put forth by Grabitchewsky, that the influence of the antitoxin makes itself felt on the cells of the organism. Its action is a stimulation of the organic resistance. (Metchnikoff.)

According to these views, the consensus of opinion now is that the direct effect of antitoxin is upon the nuclei of the cells, stimulating them to the increased production of nuclein, or of nuclein of a more healthy and resistant tone.

The Nature of Nuclein.—A study of the nature of nuclein gives force to this view.

Nuclein, as defined by Vaughan, is the chemical basis of the nuclei of the tissue-cells of the body. Chemically nucleins are complex proteid bodies, characterized by the large amount of phosphorus they contain.

The nuclein is that constituent of the cell by virtue of which this fundamental unit grows, develops, and reproduces itself.

Nuclein is, therefore, the fundamental basis of life. It is that element which takes from the blood its pabulum, by biochemic action, incorporates it with itself, and thus transforms inert matter into living tissue.

Thus it is seen that nuclein is the physiological unit of the organism. It is the basic element upon the integrity of which the body is dependent for that condition which we call "health." It is this which gives to the body power to resist noxious influences, such as the action of poisons and all disease-producing agents.

With this knowledge, the action of antitoxin becomes intelligible.

By the circulation the antitoxin is conveyed to all parts of the organism. It acts directly upon the nuclei of the cells. These it stimulates. The stimulation induces renewed appropriation of pabulum, increased production of nuclein, and a more vigorous functional activity. This renewed and vigorous physiological activity on the part of the cells endows them with a power, previously lacking, by virtue of which they are enabled to resist and overcome the disease-producing effect of the toxin.

This, to my mind, explains the true mode of action of the antitoxins in the cure of their related diseases, in which category, at the present time, I would place diphtheria, tetanus, and small-pox.

According to this explanation antitoxin is a stimulant to the nuclei of the cells, and, as suggested by Metchnikoff, a more appropriate name for it would be "Stimulin."

Application to Homœopathy.—But I would here make a still wider application of this explanation of the action of the antitoxins. I would apply it to the action of all homœopathic medicines in exerting their therapeutic effects in the cure of disease.

Mercury, in its curative action in syphilis, does not directly oppose itself to something which may be designated "syphilitic poison," or, a term which we may now use understandingly, "syphilitic toxin."

Mercury does not act in such manner. There is such specific poison, from the effects of which the system suffers. But, I take it, the action of mercury in syphilis, like the action of the antitoxins in their related diseases, is as a direct stimulant to the nuclei of the cells, increasing their functional activity, thus enabling them to offer greater resistance to the effects of what may be called the "syphilitic toxin."

And the same may be said of other diseases, and of other therapeutic agents. In inflammation of serous membranes Bryonia bears the relation of an antitoxin to the materies morbi that excites the diseased action. The direct and specific action of the Bryonia is as a stimulant to the nuclei of the cells. And, in this instance, let us say, to the nuclei of the cells of serous membranes.

On these lines I would make like application, touching the action of Rhus in rheumatism, of Arsenicum in cholera, of Calcarea in so-called "scrofulosis," of Iodine in affections of the glands, and so throughout the entire list of homœopathic medicines.

In their specific therapeutic action all homœopathic medicines are, so to speak, antitoxins; or, to use the preferable term, all are "Stimulins."

Must Be Applied According to Similia.—But I would not have the fact overlooked that medicines are thus specific, and curative, in their action—after the manner of the antitoxins—only when applied according to the indications of Similia.

Conversely, this fact leads to still another application. Because diphtheria-antitoxin is homœopathic to diphtheria, it by no means follows that other medicines are not also homœopathic to the disease. The cyanide of mercury, the bichromate of potash, and others that we have found to be of signal service, still hold the same place that they always have, according to their well-known indications.

When "indicated" they are all "antitoxins," all "stimulins." The recent discovery of a new therapeutic agent in diphtheria does not imply that all others must be discarded. Antitoxin is more frequently indicated in diphtheria for the same reason that any homœopathic remedy is indicated in any disease—because in its pathogenetic effects it produces a condition the symptoms of which more nearly re-

semble the symptoms of the diseased condition for cure of which the medicine is given. In a word, the antitoxin more nearly covers the "totality of the symptoms."

But, notwithstanding this fact, mercury, potash, and the rest, have their own spheres of action in diphtheria; they exert a curative effect, and there is no reason why they should be discarded simply because a new medicine has been added to the list of homœopathic therapeutic agents in this disease.

Prophylactic Action.—What has already been said regarding the action of antitoxin, may also be applied to its prophylactic action. In this respect it may be likened to Belladonna as a prophylactic in scarlatina, or to vaccine in small-pox.

Rapidity of Action.—The analogy between the action of antitoxin and other homœopathic therapeutic agents is further illustrated in the matter of rapidity of action.

It is a familiar fact to us that many of our medicines, such as Veratrum album, Colocynth, Belladonna, and others, sometimes act almost instantaneously; that is, as soon as they can be absorbed and diffused through the circulation. In many instances, with many medicines, it is noted that the "improvement began after the first dose."

In this respect the antitoxins show similar action. Ernst says: "A most important characteristic of the immunization of antitoxin serum is its rapidity of action. Immediately after the introduction of the serum, and its diffusion through the organism, the animal, without presenting the slightest symptoms, passes from the susceptible to the refractory condition, and will then resist the action of the virus to which it showed itself some moments before entirely susceptible."

Analogy in Infinitesimal Dose.—The analogy is still further carried out in respect of the size of the curative dose, for, as in all homœopathic medication, so in serum-therapy, the curative dose is minute, sometimes infinitesimal.

Ernst says: "Whatever antitoxin may be, its power surpasses the imagination, since in the condition of dilution in which it is found, it is sufficient to neutralize enormous doses of toxin. One cubic centimetre is sufficient to neutralize thirty times its volume of toxin; it is then possible by the addition of .0001 c.c. to neutralize completely an otherwise fatal dose. To preserve mice the quantity is so infinitely small as to be difficult to give an idea of it. Serum of an activity of one-millionth and more is sufficient to immunize a gram of mouse. One cubic centimetre is sufficient to protect seventy thousand mice."

Ernst further says: "The preventive power of diphtheria serum is in most cases the one-hundred thousandth, while it is possible to obtain a tetanus serum that is active in a dose of the one-hundred millionth."

From the facts here presented, establishing a close analogy between the action of the antitoxins and other medicinal agents, I would submit the following:

Conclusion.—Antitoxin, as a therapeutic agent, applied to the cure

of disease according to the indications of Similia, in its mode of action differs in no respect from that of other medicinal substances, and it offers, therefore, still another exemplification of the homœopathic law of cure.

Discussion.

J. S. Mitchell, M.D., Chicago, Ill.: This subject is of such deep interest that its discussion cannot fail to attract the close attention of everyone.

Most of us have had varying experiences with antitoxin.

Like many new things it was quite generally accepted at once, as something which we could rely upon. When the statistics of the American Pedological Association were first published, the mortality from diphtheria, it was apparently shown, had been very greatly reduced by the introduction of antitoxin. When we scan the later statistics we find there is more variance in the results.

In some sections we have had a diminution in the mortality. In other sections it has not been so great. Many cases are now considered to be diphtheria which, in ordinary clinical experience, are not so.

My early experience with the use of antitoxin was a little singular. I, myself, admit that, like a great many who still regard the subject as *sub judice*, I have never used antitoxin, but I have seen it administered often where I have been called in consultation, and have personally watched the results.

In the first case the patient to whom it was given died from a toxin which was not due in any way to diphtheria as it usually manifests itself. It was a plain case of poisoning by antitoxin.

The second case was one of laryngeal diphtheria which, under ordinary circumstances, would have died in twenty-four hours, and in which the effect of the injection was simply marvellous. It was only a few hours after the first injection before the symptoms subsided, and the next morning the child was absolutely out of danger. Observation of subsequent cases has shown no such striking results.

In the estimation of the value of antitoxin, you must consider whether the effect of the antitoxin is due to its characteristic as an antitoxin or to the carbolic acid which all antitoxins contain. Carbolic acid is a very virulent poison. It is exceedingly fatal sometimes in very small doses. That element must be considered. It was a question in my mind whether my patient, who died after the use of antitoxin, did not die of carbolic-acid poisoning.

I cannot but commend the paper which has just been read. Its argument is based upon carefully collated facts. So far as the case now stands it looks as though antitoxin might be proved a homœopathic remedy, and an effective one. We must be cautious about new remedies, some of them which have been a little longer in use were accepted pretty generally at first, then their efficacy was doubted, afterward the evidence grew even less favorable, and the last end was a fall into

disuse. As far as antitoxin is concerned it is still a subject for deep thought and careful observation. I would like to hear and to know further the experience of the profession.

T. L. HAZARD, M.D., Iowa City, Ia.: I am not very well prepared to discuss this question, because I have never used antitoxin. Iowa City has been very much favored for several years, and we have had very little diphtheria there. I have decided, however, if I have an opportunity, to give antitoxin a trial, because I have had, in studying up the question, a great deal of information on the subject which leads me to believe that it will be effective.

I was talking with a lady physician who has used it more or less. She always gives it a test before using it, in order to ascertain if the virus is safe. She gives a hypodermic dose to a cat. If the cat is not killed in fifteen minutes, it is safe to use on the patient. (Laughter.) I think perhaps that would be a good plan to pursue, because, undoubtedly, a good many cases have been killed with antitoxin, and perhaps it was because the virus was too strong, or something was wrong with the preparation. Of course, it is possible, in fatal cases, that the injections have not always been properly made.

W. A. HUMPHREY, M.D., Plattsmouth, Neb.: I have used antitoxin quite a little in my practice, and while I am not prepared to say just what I think, I must say there are some instances in which it was eminently satisfactory. Only last week I was called to see a case of diphtheritic croup. The little fellow had been struggling along four or five days. I injected 1,000 units into his loin. His voice was completely lost. The night after the injection he slept all night, and the next day his voice was restored. He recovered without any further remedy.

Question: Was any other remedy given?

Dr. Humphrey: Yes, Iodine was given two days before the antitoxin.

Question: Which did the work?

Dr. Humphrey: Well, I did the work, and the remedies did the rest.

I have been looking very carefully to the reports upon antitoxin, and I only hope that we will be able to find in antitoxin a remedy upon which we can rely more than upon any other remedy which we have hitherto had to depend upon. Any physician will hail anything which will save the lives of these little people.

Question: How much credit does the doctor give to Iodine in the cure of that case?

Dr. Humphrey: I have cured one case of croupal diphtheria with Iodine alone. I have cured one that I believe is due to antitoxin. I cannot say which is the superior remedy.

JOSEPH P. COBB, M.D., Chicago, Ill.: My observation in the use of antitoxin extends over several cases where antitoxin has been used exclusively, and over those where it has been used with homœopathic

medication. It seems to me that we have passed beyond the stage when it is possible to say that antitoxin has not been of value to physicians in the cure of diphtheria. I do not purpose to take up any time in the discussion of the value of antitoxin. It has made a place for itself. We want to know how it acts and where it acts and what cases will be benefited by it and what will not. It seems to me that it makes a great difference, when antitoxin is used, whether it is used early in the disease or whether it is used late in the progress of the disease.

If the essayist's theory is true, why should it make any difference if the antitoxin does act by its influence on the nuclei of the cells? Why should it make any difference as to the time when it is administered? Why do not we always get the same result? As a matter of fact, in the observation of those who have used antitoxin, it does make a difference when it is used; that the majority of fatal cases where antitoxin is claimed to have been a part of the cause of death are the cases where it has been used late, and where there has been a suppression of urine, and where the new poison cannot be gotten rid of. If it is true that the condition of the kidney is a factor, it seems to me that this point of time must be considered. I believe, however, that we need to go back farther than Dr. Gatchell's suggestion. It does not seem to me that it is the walls of the invaded tissue alone, the cells of the muscle-tissue or gland-tissue, or organ which is being invaded by the toxin, that the antitoxin acts upon. We must go back to the trophic cells in the nerve-tissue. I believe we shall find a large part of that action is the effect on the trophic cells—those cells which keep up the nutrition of the cells of the body, and upon the leucocytes, the defenders of other tissues.

C. B. KINYON, M.D., Ann Arbor, Mich.: This is a subject of profound interest to me, and one in which I have had a careful and painstaking experience over a period of four years. I have seen eighty-six cases. I was forced to use it in the first case. It was a case in a very prominent family, and the father simply said: "If you don't use that I will get someone who will." I did not like to take the responsibility. The father said he would take the responsibility, if I would use it. This was late in the disease, and death seemed certain. I have seen scores of such cases which died, and very few lived—only two cases in twenty years. This was on the seventh or eighth day. The patient got well. From then on I have used it freely.

One word about the preparation: I take a responsible firm's word for that. I do not try it upon animals. It depends very largely on the individual, where I make the injection. If there is a thick muscular chest, put it in there. I have never lost a case by watching this. You must be careful. If you reach in too deeply you will poison the patient. In twenty-seven cases I used no other remedy at all, but I do not use it in all cases the first day or two, but in many of these cases I was called late.

Peroxide of hydrogen is the best thing in the world to spray the throat with, and that is the only medicine I give when I give antitoxin. These were all malignant cases, of course.

One thing which has hurt the use of antitoxin is that reports sometimes come to us that are unreasonable. We hear that antitoxin is given the patient when he is dying, and in twenty minutes the patient is out of danger. Such reports are absurd, and there is no truth in them. In some of these cases before referred to I did not see any improvement for twenty-four or thirty-six hours. It takes a long while sometimes.

My judgment of antitoxin is this: If I had a case of diphtheria and did not use antitoxin, and the patient died, I should consider myself responsible for the death.

C. E. KAHLKE, M.D., Chicago, Ill.: My personal experience with antitoxin has been so limited as to scarcely warrant my entering into the discussion. When it was first brought prominently before us I took the privilege of observing a great many cases in one of our large institutions of Chicago, and, as an observer, I became disgusted at first. Competent men, graduates of the old school, after a few weeks' treatment, claimed they would not use it in another case. On further investigation they would usually trace the trouble to an impure preparation of the antitoxin. Consequently, in getting a careful preparation, the results were much better. I became reconciled to the use of antitoxin in Homœopathy. We did not have the opportunity of trying our remedy, as the old school had for using antitoxin. Personally, I have had very little experience. I have had a few cases, saw them all early, and in every case used antitoxin with good results. I have had more experience with the use of toxins of erysipelas and prodigiosis in treating malignant growths.

To me, the theory advanced by Dr. Gatchell seems very plausible.

R. LUDLAM, M.D.: I have nothing to say on this subject except to approve the vital test that was proposed by my good lady friend, unknown to me, to try the poison on the cat first. I might say, personally, that I wish the cats might be disposed of in that way. There is a serious side of this question, however. It does strike me that we are in no position at all to be intolerant of those who are looking about for newer remedies, additional remedies, better remedies, than we have for some of these terrible cases. When we criticise the allopaths for having abused us we should be tolerant ourselves, because we are coming out on top. If anything can indirectly prove the truth of the homœopathic law—and I believe this does, in a roundabout way—let us receive it, accept it, and use it what we can to the advantage of the patient and the credit of our school.

J. H. MCCLELLAND, M.D., Pittsburg, Pa.: Now the question is, whether the use of antitoxin (and I have used it successfully) is in accordance with the rule of practice, "Let likes by likes be treated."

I myself thoroughly believe that it is, and I believe, as suggested by Dr. Gatchell, that the corollary is true—*i.e.*, when you give a remedy that is thoroughly homœopathic, you must give it in greatly diminished quantity. That nearly always follows. Now, the *theory* upon which this drug acts may be discussed with much interest, but it is the *fact* of its homœopathicity which is important. We say the homœopathic remedy acts because of thus and so, and that antitoxin acts because it infringes upon certain ultimate cells in a certain way, but this is merely a well-grounded theory. It looks to me that, aside from the theory of ultimate cell action, antitoxin acts like any other homœopathic remedy, by increasing the health-ward tendency of the organism.

In its normal state the individual makes toward health, and the remedy acts by exciting the tissues health-ward. In applying remedies for this purpose, we accept Hahnemann's rule of practice, "Let likes by likes be treated"—"Similia Similibus Curentur."

H. C. Allen, M.D., Chicago, Ill.: I have been somewhat interested in this discussion. The test of antitoxin as propounded by my friend from Iowa is the death-test, I think we may call it. A few months ago a beautiful young lady, a resident of a city in Iowa, died within fifteen minutes after the remedy was used. It was actually a death-test.

But, as Homœopaths, why should we treat this remedy any differently from any other in the Materia Medica? It acts on the nuclei of the cells, according to Dr. Gatchell. All others act in the same way. This is nothing new. Why should we not place this on the same basis and test it upon the healthy, just as we have tested Aconite? The other school tried Bryonia, and for several years it was in their Materia Medica, but afterward thrown out altogether. Hahnemann proved Bryonia on the healthy, put it in his Materia Medica, and there it will remain for a thousand years, as good as it was when he put it there, because the pathogenesis was founded on science, not empiricism.

I object to antitoxin for two or three reasons. I have never used it in the crude form, and never expect to. What is antitoxin? Is it salicylic acid or carbolic acid plus the toxin poison of diphtheria? How is it prepared? What do we know about it? Just about as much as we know of Koch's tuberculin, that "went up like a rocket and came down like a stick."

Let us stand by our tenets and adhere to our principles; then we will know just what we are doing and why we are doing it. Antitoxin acts rapidly when it happens to be the similar remedy. So does Aconite, Belladonna, Mercury, etc. Every remedy in the Materia Medica acts promptly when it is the "similar" remedy.

Now as to the preventive power. If this is properly used, it has just as wonderful a power in preventing diphtheria as Belladonna has in scarlatina, or any other remedy that is a similar to an epidemic. It will prevent as well as cure, when it is the genus epidemicus.

One word in regard to peroxide of hydrogen as a spray in the diphtheritic throat. I have never used it myself, but I have seen it used, hence a word of caution. It will eat off or dissolve the diphtheritic deposit, and you will have a raw, absorbing surface to take in the poison, and your patient may die of septicæmia in a very few hours or days.

About twenty years ago I began to use homœopathic antitoxin—Diphtherium. I have used it ever since, and have had some wonderful results. It is as good a remedy as any in the Materia Medica, when indicated; but let us use it homœopathically, as we do every other remedy.

J. C. Wood, M.D., Cleveland, O.: I have had no experience whatever with the use of antitoxin in diphtheria, for the simple reason that I have not treated diphtheria for ten years. But I think Dr. Allen is right. If the remedy is a homœopathic remedy, it should be proved homœopathically. I have, however, experimented with the toxins of erysipelas and prodigiosis in the treatment of malignant lesions, and particularly in the treatment of sarcoma. The point I wish to make is this: According to the experiments of Coley, the toxin of erysipelas and prodigiosis proved curative in the round-celled sarcoma only. It is probable that the toxin of erysipelas and prodigiosis is homœopathic to this particular form of malignancy only. To me this affords food for thought. Why should this toxin be curative only in one form of malignancy? Is it not because it is homœopathic only to this form of malignancy? Why, then, is this toxin of diphtheria uncertain? Undoubtedly it is useful in a certain type of diphtheria, and I believe that future experience will prove its homœopathicity to this type.

C. E. Fisher, M.D., Chicago, Ill.: I have been very much interested in this question for three or four years, and much impressed by its importance. We know that within the last few months, instead of decreasing the dose, the tendency is to concentrate the poison to a greater degree than ever before and increase the amount used. Now, is this a homœopathic procedure? Of course, we understand this is not the essential point—the relation to our law of cure. But until we have proven the remedy and demonstrated its efficacy, according to its pathogenesy, if it has one, I think we have no right to try to steal what seems to be a fairly good allopathic remedy.

C. Todd Hood, M.D., Chicago, Ill.: Diphtheria is a subject to which I have given a great deal of attention. Antitoxin was forced upon me. My experience with antitoxin has been from necessity, indeed. But I do not see, nor do I care to go into the discussion of what our experience has been. But it seems to me that it is not right to come before the medical profession and bring in any one case and say that the cure has been made by one remedy; and it is not fair to claim the efficacy of antitoxin when we give our own homœopathic

remedies, which we have used for so many years. I will use antitoxin when I must. It is, in my opinion, a homœopathic remedy in diphtheria because it has with it carbolic acid or some other equally powerful antiseptic; and if any of you have ever tried the experiment of using carbolic acid, you will get as good results as from antitoxin, and many are using it to-day. The antitoxin, as antitoxin, will have gone its way, and in its place will come carbolic acid when indicated.

GEORGE F. LAIDLAW, M.D., New York, N. Y.: Personally, I have never used antitoxin in diphtheria, but many of my colleagues with high experience tell me that their success with antitoxin has been marvellous, and I have accepted it, and I hold myself ready to use antitoxin when I am not satisfied that things are going right. I do not think we can claim it as a homœopathic remedy. The science of Homœopathy is that medicine we administer to the sick is that it produces symptoms similar to those in the patient in a person that is well. No one has ever seen antitoxin. We do not know whether it is a solid, a liquid, a crystaloid, or ether. If you inject it in a rabbit it will become immuned with diphtheria for a certain time, and if you inject it in a second it will become immuned; and if you inject a fatal dose in one of these it will get well, and by varying the dose in one of these it will get well or you could make the rabbit very, very sick, or only just a little sick.

CARL J. LUYTIES, M.D., St. Louis, Mo.: It is not customary with me to resort to this remedy at the beginning of the disease. I have witnessed cases where the antitoxin gave prompt relief, but I do not believe it is a homœopathic remedy. To me it seems a chemical antidote. It certainly seems to have a marvellous effect. Furthermore, I want to say that the evil effect of the antitoxin is not always due to the preparation. The manufacturers realize that it will not keep indefinitely. They usually change all bottles kept for six months for fresh bottles. I think it should be kept at a temperature of 65° F.

Now, in regard to the proving of antitoxin. I feel that the hypodermic injection and the results from it are not sufficient. The remedies of the homœopathic school have been proved by taking them into the stomach. In order to get a proving of antitoxin it should be administered in the manner of other remedies. Furthermore, I believe that if we administer antitoxin per os et per rectum its effect would be entirely different than by hypodermic injection. I have had no experience with it in this way.

G. A. GORDON, M.D., St. Louis, Mo.: So far as the action of antitoxin is concerned, I think there can be but one verdict regarding it. There has been a great deal of talk against it. I have had the good fortune to have a general report on two of those cases which died within a few minutes after antitoxin had been administered. It would appear that the subject had been injected in a vein. I believe if you take an empty

hypodermic syringe and fill it with air, letting ever so little air get in you, you would have the same result. I have never found anybody who would try the experiment upon a human being purposely.

E. B. HOOKER, M.D., Hartford, Ct.: I have had considerable experience with antitoxin. I have used it successfully in those cases of laryngeal diphtheria which, from previous experience, I had every reason to believe would die very shortly. I have seen the exceedingly good results coming about within twenty-four hours or thirty-six hours which have been mentioned by one or two gentlemen; so that, although my experience has not been so large as that of some others who live in larger cities, yet such experience as I have had inclines me to believe that in antitoxin we have a valuable remedy.

Now the question has been asked, Why should we abandon our well-tried remedies, which have proved so successful by our forefathers and ourselves, for this new and comparatively untried remedy? I will tell you why I do. Because, when I get a case of laryngeal diphtheria, I greatly fear that I shall not be able to save it by the ordinary remedy. I will not say that the other gentlemen are not able to do so. I have saved a sufficient number of such cases with antitoxin to make me believe that its use is justifiable. Cases that would have died within twelve hours certainly, I have been able to save by the use of antitoxin and to avoid intubation. Where antitoxin has failed me has been in those laryngeal cases where its use has been delayed so long that when I was called in it was too late.

I submit to you, ladies and gentlemen, that the proving of antitoxin, roundabout though it may be, is as good as the proving of other remedies which were brought forward and which are claimed to be legitimate by certain of our members. I say that the proving of antitoxin is as good as that of the nosodes. The first question in relation to antitoxin is: Is it a useful remedy, a valuable remedy, a remedy which we should use in certain cases? The second question is: Is it homœopathic? I am unable to decide that question. I am inclined to believe that it is. I hope it is. I regard that question, however, as secondary. The main question is, Can we save lives by the use of this remedy which would otherwise be lost? If we can answer that question in the affirmative the other question may well await settlement in the future.

F. W. GREINER, M.D., Two Rivers, Wis.: Being a Homœopath, I believe in the homœopathic ways, but do not believe they are the only ways. I have not as yet used antitoxin, though I live in a town where we have considerable diphtheria. I have little fear of pharyngeal cases, but feel helpless in those of laryngeal type, and have determined to try antitoxin in the next laryngeal case I have. I have cured a few cases involving the larynx, but do not know what remedy (if due to remedies) performed the cure.

Perhaps my faith in antitoxin is weaker because of the fact that another physician (of the old school) in my town, using antitoxin in

the same epidemic, under the same conditions and among the same class of patients, lost about the same percentage of cases that I did without using it, which is about twenty-five per cent. But from the fact that the laryngeal cases are so fatal in my experience, I shall give antitoxin a fair trial, and if it has real merits, shall continue its use.

As for its homœopathicity, I have not given that sufficient thought to express an opinion, but had I believed it to be so I would not be among the number who have not used it.

If investigation proves merits for it, and that it is homœopathic to this dreadful disease, we will all be strengthened in our faith in the Hahnemannian law of cure, but let us make no claims that the test of time cannot substantiate.

C. GURNEE FELLOWS, M.D., Chicago, Ill.: Personal experience is evidently the order of the day. I believe antitoxin is just as much to be used in the homœopathic school as any other. For myself, I see no reason to believe that it is homœopathic. I am very much opposed to giving it to other members of the family when not suffering from diphtheria. I am more afraid of antitoxin than taking care of them rationally and homœopathically. Horse-sense is a great deal better than following a dictum.

Dr. Charles Gatchell: Using antitoxin is horse-sense.

Dr. Fellows: A great many people use it because the neighborhood demands it. You may talk about controlling things. You may do so in your immediate family, but you cannot control the neighborhood. I decidedly use the antitoxin when the case becomes dangerous, if I use it at all. I see no reason to believe that it is homœopathic, but its use is perfectly justifiable. I prefer to start in with antiseptics locally and homœopathic remedies internally. I have used antitoxin and have seen it fail; then intubated and tracheotomized, and they have all failed; but I would keep right on using them, for by any or all of these means we do save cases. I have used antitoxin successfully, but always with local means and internal homœopathic remedies.

S. P. HEDGES, M.D., Chicago, Ill.: I must say I have taken charge of a case of laryngeal diphtheria with a great deal of anxiety. I have lost a large percentage of them previous to the use of antitoxin. I was very much opposed originally to the use of antitoxin. In the first case where I used it the effect was something remarkable and surprising, and, although used as a last resort, the patient recovered. I have never had a fatal result from antitoxin. I never used it at the beginning, and do not use it until the second or third day. I have seen, in the treatment of pharyngeal diphtheria, a very few cases where I used antitoxin. I have made the application hypodermically, below the scapula, in the back, usually. I have never seen any serious results from the use of it. I do not see why we should not use it. As to its homœopathicity, I am at a loss for an opinion. I hope it is. I think we are not able to decide. I have used other remedies hypodermically

when I could not get the application through the mouth. I have used Belladonna and Nux Vomica hypodermically in the case of a child who could not swallow. I believe it is efficient. For myself, I usually use antitoxin, not at the beginning, but when I find it necessary.

We rarely treat a serious case of disease with one remedy. We can treat chronic cases in that way; but who of us can take charge of diphtheria and use one remedy and stick to it when the patient is getting worse? We use many remedies in a day, and when the patient responds to one of them, that is the one to receive the credit. I have never treated a case of diphtheria with antitoxin alone.

I have lost only one case of laryngeal diphtheria since I began the use of antitoxin. I have lost about nine cases in the course of several years, and I believe we should use it.

R. W. CONNELL, M.D., Omaha, Neb.: I have only one guide in the use of antitoxin, and that is to use it as soon as I can diagnose diphtheria. My experience has not been great in the use of it, but from all the reading—and I have studied the use of antitoxin very, very thoughtfully, and have gotten all the reports both from the allopathic and homœopathic divisions, and from the results as given in these reports, it is recommended that antitoxin should be given early. Now, whether it is homœopathic for the disease I don't know and don't care. I believe that the first duty is the saving of lives. As to whether it is homœopathic or allopathic, or some chemical action, that can be proved in the future. I have used it on fourteen cases. Two died. The two that died I did not use it in time. The first case in which I used antitoxin was hopeless, and I know there was nothing that could be done for it, unless it was antitoxin; and I tried it. I used only 1,500 units. There was some improvement for the first three hours, and I am confident if I had used, four hours afterward, 2,000 units, I would have saved the child. But I did not use it in time to give it a fair trial. I think you should use a big dose—2,000 units—regardless of the age of patient. I am inclined to think that it is not exactly homœopathic. I think antitoxin acts as a sort of antidote to the diphtheric poison. In the other case the patient had been sick from Saturday night to Thursday. The results were very fine so far as the results from antitoxin are concerned. He improved very well right along for four or five days, and then there was paralysis of the stomach, respiration, and heart, and he lived a number of days and then died from paralysis; but that was not due to antitoxin.

I have used homœopathic remedies in every case of all those in which I have used antitoxin. I have used it with the most marked results. In my first case I had a consultation in regard to the diagnosis with one of the leading allopathic physicians in Omaha. He concurred in my diagnosis. I used 2,000 units. The child was restless and had not slept for thirty-six hours. The temperature was 104° F.; breathing labored. I was sure it was going to be a desperate

case. An hour and a half after using antitoxin the temperature dropped 1½°. Two hours afterward the child wanted her doll, sat up, played with it for awhile, laid down, and had six hours of quiet and natural sleep, with breathing much improved. In twelve hours the membrane began changing from black to milky color. Forty-eight hours after I felt sure she was out of danger, and she went on to perfect recovery with no interruption. I desire to go on record as a strong advocate of antitoxin.

W. H. HANCHETT, M.D., Omaha, Neb.: My experience with antitoxin has been peculiar. I have seen several cases where antitoxin has been used. These cases have been in consultation with, or following, other physicians. Thus far, I have not begun to use it as a medical agent in my own practice. I do not say that I am bitterly prejudiced against it, nor have I become enthusiastic for its use.

In a wide experience in this city for the past fourteen or fifteen years (outside of croupous cases of diphtheria), my experience has been so satisfactory and successful with homœopathic medicines, that I have not been driven to this new expedient or medicine, if so you please to call it.

I am inclined to believe that antitoxin as employed in the treatment of diphtheria is homœopathic to the disease. Many untoward results were reported from the use of antitoxin during the period of its innovation in the field of medicine. Undoubtedly the first preparations were largely to blame for its ill results. My conservatism has perhaps kept me from trying or experimenting with this new preparation which may prove a boon to humanity.

I am inclined to be honest and fair in all dealings with any new medicine in my practice. My own personal observations thus far, have not been flattering to the use of antitoxin, but I am inclined to think that the cases where I have seen it used have either been neglected too long before its use, or that they were of so desperate a type that perhaps nothing could have saved them.

My mind has been in the formative or crystallizing state for the past two or three years on this subject. I have eagerly gathered all the information I could from my reading and observations. In case I should meet with a severe epidemic of diphtheria in the near future, I am frank to say that I shall give it a fair and thorough trial, and furthermore, I believe the reported experiences of those who have thoroughly tested it are to be trusted. I shall try antitoxin, and, perhaps, during the next meeting, I may become as enthusiastic a supporter of its use in this awful and dreaded disease as my most sanguine colleagues of this society now seem to be.

CHARLES GATCHELL, M.D., Chicago, Ill.: This discussion has been very gratifying, indeed, to me, for since hearing it, I am more profoundly convinced of the correctness of the position I have taken than I was before. Since presenting my case to this intelligent court, and

since receiving the verdict in my favor, I am confident that I am right.

In all this discussion the one thing for which I have listened, the one challenge which I thought I would have to meet, I have failed to hear. No one has questioned the favorable results obtained in the treatment of diphtheria by the use of antitoxin. And this, whether antitoxin were used alone, or combined with homœopathic, or with empirical treatment. This is the crucial test. So long as you do not question results, I care not what other criticism you make.

One speaker suggested that the carbolic acid used in the preparation of antitoxin may be responsible for some deaths that have occurred when it has been used. Still another expressed the belief that carbolic acid is the agent that cures. These two diametrically opposite opinions may be taken for what they are worth, and that is nothing. The one may well be permitted to offset the other.

Another speaker suggests that new remedies sometimes pass away. Yes, that is true of remedies that are not homœopathic. Gelsemium was once a new remedy; Glonoin was once a new remedy, but they are still with us. It is because they are homœopathic. For the same reason antitoxin has come to stay, because it is homœopathic.

Dr. Cobb adds that the action is upon the nuclei of the leucocytes. That is precisely what I have said: "On the nuclei of the tissue-cells." Histologically, the blood is a tissue—it is a cellular tissue with fluid intercellular substance.

Dr. Kinyon asks why it should be necessary to use this new agent by hypodermic injection. My reply is, that it is not necessary. It may be administered by the mouth or by rectal injection, and the action is the same.

The famous Iowa case of death following the injection of antitoxin, more than a year ago, has been doing service long enough. It is about time to find a new one. And you will not find it in the case of the child in Berlin. That child died of suffocation, from getting vomited matter into the trachea.

The criticism has been attempted that antitoxin has not been isolated. Let that be so. What of it? Those physicians who are the greatest sticklers for purity in Homœopathy are the very ones who are using the greatest number of remedies, the active principles of which cannot be isolated. What is the isolated active principle of Psorinum, of "Lac caninum," and of the nondescript "Bacillinum"? Does anyone know? Have the alleged active principles of all the moonshine potencies in the c.m., the mm., and the dm., made by Swan & Fincke, ever been isolated? Does anyone know whether they are matter, or ether, or spirit? This is an objection that can hardly be taken seriously. Another speaker objects to antitoxin because it has no sufficient proving, and yet he professes to have used something for years that he calls "antitoxin." But his antitoxin has no "proving."

In conclusion I will remind you that no one has seriously questioned the results under antitoxin treatment, whether used alone, or

combined with any other treatment whatever. This is a fatal admission. What does it mean? It means that for the first time in the history of our school the older school has presented the world with a remedy for the cure of disease, the results of which are admitted to be as favorable as results under homœopathic treatment. The natural inference is that antitoxin is a homœopathic remedy.

Pertussis and Parotiditis: Their Treatment.

By George B. Peck, M.D., Providence, R. I.

Out of every thousand prescriptions written by members of the society for the amelioration of that group of morbid phenomena, popularly designated whooping-cough, at least 175 are for Drosera, 153 for Belladonna, 123 for Ipecacuanha, 76 for Cuprum (metallicum or aceticum), 54 for Corralium rubrum, 44 for Antimonium et potassium tartaricum, 24 for Mephitis, 20 each for Aconitum napellus and for Hyoscyamus, 18 for Naphthalin, 15 for Coccus cacti, 13 for Kali bichromicum, 11 for Bryonia, 9 for Magnesia phosphorica, 8 for Chelidonium majus, 6 each for Ammonium bromidium and Castanea vesca, 5 each for Arsenicum album, Bromoform, and Hepar sulphuris calcareum; 4 each for Ambrosia artemesifolia, Carbo vegetabilis, Calcarea carbonica, Calcarea phosphorica, Cina, Gelsemium, and Hydrocyanic acid; 2 each for Bromium, Iodum, Kali bromatum, Kali carbonicum, Kali muriaticum, Lobelia inflata, Magnesia phosphorica, Mercurius solubilis, Mercurius vivus, Passiflora incarnata, Phosphorus, Sambucus, Veratrum album, and Veratrum viride; 1 each for Antipyrine, Arnica, Assafœtida, Camphor monobromide, Capsicum, Carduus benedictus, Chamomilla, Cimicifuga, Cnicus arvense, Conium, Cuprum ammonio sulphuricum, Ferrum phosphoricum, Grindelia robusta, Lactuca, Opium, Petroleum, Phenacetine, Phenocoli, Pulsatilla, Rumex crispus, Spongia, Thymus, Bromide of Gold, and Extract of Chestnut leaves. One doctor mixes in solution the bichromate of potassium with the iodide and nitrate, and administers a dose every half hour, or every three hours, as the condition indicates; another gives no medicine, but depends on cresoline; a third has discovered that "no remedy is especially adapted"; a fourth finds the indicated remedy is sufficient, the only trouble is to find it; a fifth failed to report the medicaments administered, while a sixth, who has practised seven years, has never met with a case of pertussis, but quite a number of cases of mumps, all in persons over twenty years of age, and most of them in women.

No special accessory measures are resorted to by 63 of my 200 correspondents, although 46 recommend open air without exposure. Cresoline vapor is resorted to by 20; one remarking that it is more valuable than all other medication, and another that Creasote may be substituted, while the cresoline lamp is specified by seven others. Changes of temperature are avoided by 15, which protection two others secure by keeping their patients in the house; as many restrict them to a

warm room, and three to rooms with a warm, moist temperature. Six direct to keep the sick warm, at least, two of whom intimate plainly that it is to be accomplished through suitable clothing. Five send them to a gas-house, while as many more are content with steam inhalations. Four order oil-rubbings, three sulphur to be burned in the room, and as many more a sail on salt water. An equal number find the spasm often relieved by drawing forward the lower jaw during an attack. Resorcine spray, carbolic-acid vapors, eucalyptus fumes, formaldehyde fumes, Roche's embrocation, slippery-elm tea with lemon and sugar, plenty of drinking-water, warm or cold; protection of the chest, flannel to the skin; in severe cases change of climate are recommended each by two. Single practitioners recommend change of air, change of location, send to lower elevation, the avoidance of dust, and odors and excessive exercise; keeping the patient as quiet as possible, rest in bed, bath during fever, hot fomentations, cold-water compresses, pinus ointment, turpentine and lard, stimulating embrocations, warm cocoa-nut to chest on flannel, rum and garlic locally, glycerine externally, flannel to back and chest, saturated with a mixture of two ounces of camphorated oil, three ounces of vaseline, one ounce of terebinth; and in bad or complicated cases the bowels and liver be kept active; tar ointment, inunctions of cocoa-nut-oil, inunctions of vaseline, inunctions of lanolin, hot lard-rubbings, salt glow, cold bath every morning, warm baths, sea-water baths, chamois chest-protector, cotton or wool jacket, normal woolen stuff, snug-fitting jacket for support to chest, turpentine fumes, sulphur fumes, formalin, two per cent. spray, in room; peroxide of hydrogen vaporized, coal-tar vapors, medicated vapors, steam, terebene inhalations, dilute amyl-nitrite inhalations, chloroform inhalations, antiseptic vapors (like menthol, cresoline, etc.), sponge, containing a few drops of the oil of eucalyptus, suspended over the sleeper; a sponge tied on the chest, below the chin, and saturated with a mixture of the oils of turpentine and eucalyptus, half a drachm of each in alcohol sufficient to make one pint; lemonade, flaxseed-tea with lemon and sugar, occasional small doses of chloral, Castanea vesca syrup, ten drops of glycerine in the throat, hot compresses to the throat, occasional hot Hamamelis fomentations to the throat, compression of the throat, hot or cold; protection from excitement, restraining of the cough, if possible, by swallowing; an abdominal bandage in severe cases, an abundance of fresh air, but not too cold an atmosphere; keeping the patient in a warm moist atmosphere, and various inhalations occasionally. One states that three fumigations will cure the neuroses; two forbid all inhalations, another all disinfecting lotions as well as all things else that pollute the air; a fifth keeps his patients in the open air as much as possible, after the catarrhal stage has been controlled, while a sixth orders his change of air in the later stages of the disorder. One doctor keeps his patients seated and quiet, always in an upright position when coughing, holding little ones thus; another tickles the throat with a feather if suffocation threatens during a very violent paroxysm; still

another has found the cresoline lamp a failure, while yet another recommends "moderation in everything." Three doctors at once vaccinate if the patient has not been already thus treated, having observed the cough often subsides as the resulting inflammation manifests itself. Seven correspondents make no statement on this topic.

No change at all is made in the dietary of sufferers from pertussis by fifty-one per cent. of our members. A light, easily digested (nutritious) diet is recommended by thirteen per cent., good nourishing food by seven per cent., one of whom specifies malt preparations; an easily digested diet by six per cent., a liquid diet by four per cent., a semi-solid diet and a milk diet, each, by one per cent. More frequent feeding with smaller quantities is recommended by six per cent. Three doctors permit the ordinary diet for two meals each day, but for the third, two order a light diet, while the other specifies milk and broths. One orders, when the patient is very sick, a light diet; another says feed well, a third cautions "eat slow," a fourth urges an abundance of simple and nourishing foods, a fifth believes in bovinine, a sixth gives children crust coffee, and older patients corn-meal gruel always; a seventh directs, in general, easily digested and nourishing food; while an eight permits a tonic diet in lingering cases, only while in acute cases the diet is antifebrile. On the other hand, five forbid coffee, and four tea, while single individuals prohibit sweets, acids, condensed sweets, highly seasoned food, sour food, salted food, pepper, vinegar, and very salted meat. One says don't overload the stomach, another warns against indigestible food, a third permits the use of all cereals except oatmeal, while a fourth desires the diet should be nourishing but unirritating. Another avoids nitrogenous food in general, while two others "avoid too much meat," and a fourth tersely directs less meat. One makes no change unless the vomiting is excessive, and then he gives solid food. Four only failed to testify on this subject.

Of every thousand prescriptions for the relief of that unique inflammation of the salivary glands known as mumps, at least 143 are for Belladonna, 100 for Pulsatilla, 81 for Mercurius vivus, 64 for Mercurius solubilis, 51 for Rhus toxicodendron, 50 for Aconitum napellus, 39 for Phytolacca, 36 for Mercurius iodatus ruber, 19 for Mercurius iodatus flavus, 15 for Mercurius iodatus unspecified, 13 for Kali muriaticum, 9 each for Bryonia and Mercurius corrosivus, 8 for Gelsemium, 6 each for Apis and Iodum, 5 each for Calcarea carbonica, Ferrum phosphoricum and Hepar sulphuris calcareum; 4 each for Arsenicum album, Baryta carbonica or acetica, Conium, and Lachesis; 3 each for Arsenicum iodatum, Calcarea fluorata, Carbo vegetabilis, Clematis, and Silicea; 1 each for Aurum, Aurum muriaticum, Baryta muriatica, Bromium, Colchicum, Euphrasia, Hamamelis, Jaborandi, Kali bichromicum, Kali iodatum, Lycopodium, Mercurius dulcis, Natrum iodatum, Nitricum acidum, Oxalicum acidum, Staphisagria, Sulphur, and Veratrum (unspecified.) Three correspondents passed this topic; as many stated they have no special remedy, but treat the symptoms as they arise; one administers the indicated antipsoric, another seldom

uses remedies, while a third never treats mumps, averring that Nature does better than he can.

Accessory treatment is not resorted to for the relief of mumps by fifty-one of my correspondents, while sixteen others do not declare their habit. Thirteen avoid changes of temperature, and seventeen vaguely apply heat to the gland. Fifteen resort to cotton-batting, or cotton flannel, or absorbent cotton, one insisting that the application be hot; twelve employ hot fomentations and six dry heat; five apply Phytolacca cerate or ointment, four Belladonna ointment, three camphorated oil, as many hot poultices occasionally; two cold water, Hamamelis, hot oil, flaxseed poultices, plain bandage, unspecified inunctions, a weak Iodine solution; one each a lard or vaseline and nutmeg poultice on flannel, lard and camphor, a compress, saturated with one quart of hot water, containing two ounces of sweet oil and one ounce of spirits of ammonia; a compress saturated with equal parts of alcohol and water, the cerate of the indicated remedy, bacon rind around the neck, cool compresses (which may be the temperature of the body if desired), local applications sometimes, hot poultices, hot cosmoline, hot sweet-oil, hot Hamamelis, hot lard, mixture of equal parts of Calendula and glycerine, unguentum camphorphenique, bean poultice, salt bacon, lanolin containing five per cent. of Iodine, vaseline, hop poultices, hot water and Hamamelis, Belladonna plaster, Aconite lotion, Belladonna lotion, a mixture of one drachm of Belladonna and one ounce of glycerine rubbed on the glands. Three cover the swollen parts of the face tightly to keep the air away; one ties a soft silk handkerchief over the ears, while another orders covering only when the air is uncomfortable. Thirteen are careful that their patients are warm, while seven order rest, which eleven make sure of by keeping them in bed. Three doctors simply desire them to be quiet, one wishes them to avoid drafts and overheated rooms, another desires for them fresh air, but the next seeks the avoidance of air. Nine confine their patients to the house, but two simply order them to avoid taking cold, which another secures by the use of warm wraps. One doctor recommends "fasting," which you do not often have to enforce, another diets his patients only when the fever is high, a third applies hot poultices to the glands of the neck, a fourth uses hot gargles if possible, while a fourth gives his attention to the bowels.

Metastasis of mumps to the breasts is not a common occurrence. Not a single instance has been observed by 156 physicians, in 3,020 years, in their own practice, nor by 175 doctors, in 3,376 years, in their consultation practice. On the contrary, in private practice, two have seen, each, ten in a total of 25 years; two, six each in 77 years; one, five in 46 years; three, three each in 80 years; six, two each in 147 years, and eleven, one each in 274. In consultation one has seen ten in nine years; another six in 15; a third, four in 45 years; two, three each in 63 years; three, two each in 101 years, and one, one only in 20 years. Besides, thirteen report treating, each, several cases in 359 years, and four, many in 88 years; while, in consultation, twelve in 321

years and one in 35 years give corresponding answers. Omitting these on account of their indefiniteness, and summarizing, we find that 181 practitioners have noted, in their own practice, but sixty-nine cases in 3,669 years, and 184, but thirty-three in 3,629 years in consultation, or one case has been met every 53 years, and consulted upon every 109 years. Generalizing now, by allowing liberally for the indefinite replies, it is safe to affirm that a decent Homœopathist need not expect to meet a case of metastasis to the breast oftener than once in 50 years, or be called in consultation by a brother Homœopathist once in a century—though that once *may* be to-morrow!

For the relief of this condition Pulsatilla was prescribed, at least twenty-five times, Phytolacca nine, Aconite and Bryonia each five, Belladonna and Conium each three, Hepar sulphuricum calcareum and Sulphur each two, Apis mellifica, Arnica, Arsenicum album, Calcarea carbonica, Calcarea iodata, Clematis, Gelsemium, Kali muriaticum, Mercurius solubilis, Mercurius vivus, Rhododendron, Rhus toxicodendron, Thuja, Veratrum and "the indicated remedy" one. Three doctors confined their patients to the bed, and as many applied Belladonna ointment; two applied cotton and a tight bandage, and an equal number hot applications of Hamamelis. Single physicians order the hot-water bottle locally, the indicated remedy locally, bandaging, the prone position, even temperature, the parotid region warmly protected, warm fomentations, hot dry fomentations, Phytolacca poultice, flaxseed poultice, lukewarm cataplasm, fresh lard, hot applications, Veratrum viride cerate to breasts, a mixture of Phytolacca and water, one to four, hot or cold, as agreeable, and, "in one case only, Antiphlogistine externally." One practitioner kept the breasts warm, another provided even temperature, a third allowed but little light, for fear of the eyes; while a fourth used a hot-water bottle in an unspecified locality.

The metastasis of mumps to the testicles is of comparatively frequent occurrence, despite the fact that fifty-two gentlemen have practised 973 years without meeting a case, and 137 practised 2,602 years without seeing one in consultation. On the other hand, one practitioner has treated twenty-five in 40 years; another, twenty in 10 years; five, each twelve in 125 years; four, each ten in 87; three, each nine in 79; four, each seven in 72; eight, each six in 195; five, each five in 92; two, each four in 43; sixteen, each three in 253; nineteen, each two in 364; and thirty-one, one each in 603. Moreover, in consultation, one practitioner has seen nine cases in 15 years; another, eight in 46; two, each six in 37; four, each four in 91; as many, three each in 102; thirteen, each two in 273; and seven, each one in 180. Combining, we find 151 doctors have treated 398 cases in 2,936 years, or one in about every 7 years 5 months, and 169 have consulted on ninety cases in 3,346 years, or one in every 37 years 2 months. But, in addition, twenty-three have treated "quite a number" in 594 years, and as many, "some" in 542; while nineteen have consulted concerning "quite a number" in 364 years, and as many, "some" in 473 years.

Generalizing, we may expect to treat a case of orchitis following mumps once in 6 years, and be consulted in relation thereto once in 35 years.

For the relief of the above-mentioned cases of metastasis of mumps to the testicles, Pulsatilla has been prescribed by 99 physicians, Belladonna by 40, Clematis by 20, Aconite by 13, Phytolacca by 9, Mercurius solubilis and virus each by 8, Bryonia and Gelsemium each 7, Conium by 6, Arsenicum by 5, Mercurius iodatus (unspecified) by 4, Mercurius biniodatus, Mercurius corrosivus, Rhododendron, and Thuja each by 3; Apis, Calcarea carbonica, Carbo vegetabilis, Hamamelis, Kali muriaticum, Rhus toxicodendron, Sulphur, and Veratrum viride, each by 2; Antimonium crudum, Arnica, Baptisia, Calcarea phosphorica, Ipecacuanha, Kali iodatum, Lycopodium, Mercurius protiodatus, "The Mercurials," Staphisagria, Antimonium et potassium tartaricum, Veratrum (undesignated), and a dose of Epsom salts, each by 1. Furthermore, 39 resorted to suspension, 21 to warm fomentations, 18 to rest in bed, 17 to the application of hot water and Hamamelis extract, 10 to Hamamelis, 9 to rest, 7 to hot applications generally, 6 to Belladonna ointment or cerate, 5 to tobacco poultices, and as many to warm poultices (material unspecified); 4 each to dry heat, a recumbent position, and bean poultices; 3 each to hot poultices (to which, if the pain is very severe, one adds tobacco and the Tincture of Opium), boiled-bean poultices, and a light diet; 2 each to warm Hamamelis, iodine, cool compresses, and flaxseed poultices; 1 each to white-bean poultices medicated with the Bicarbonate of Soda, hot bran poultices, hot lotions, hot Cosmoline, a vaseline dressing, a Nitrate of Silver solution, rest on the back, Belladonna and Glycerine locally, sometimes cold applications, a paste of the Subnitrate of Bismuth and Hamamelis, Hamamelis or the Subnitrate of Bismuth, Arnica and other soothing lotions, moist heat, Phytolacca cerate, Phytolacca poultice, Phytolacca solution, strapping, cooling lotions, Belladonna fomentations, Calendula solution, alcohol, a solution of five grains of Chloral hydrate in an ounce of hot water, Subnitrate of Bismuth paste, hot-water bag to testicles, hot poultices, hot water and Arnica, Guiacol locally, Ichthyol and water, local applications unspecified. One ordered cereal foods, but another, dieting. One pencilled with carbolic acid over the part, another saw that the parotid region was warmly protected, and a third, when orchitis occurred, applied warm fomentations of Hamamelis. One affirms that hot applications are of no good, while another states a patient informed him that it was customary in that region to tie a tarred rope tightly around the waist to prevent the mumps going down, which procedure proved successful.

Concerning the complications of pertussis, at least twelve doctors report they never witnessed any, but two seldom, and two don't allow such things to occur. Three others state that after the use of the indicated remedy little trouble was experienced. One treats the disease as a neurosis and prescribes accordingly. Another considers safety is to be found in exact prescribing rather than in haphazard medication and authoritative routine. On the supervention of oph-

thalmic trouble, two send for the appropriate specialist, others darken the room and administer Euphrasia, Aconite, Apis, Belladonna, Pulsatilla, Gelsemium or Hepar internally, Hamamelis or Listerine in hot water, or Boracic acid collyrium externally, or Arnica, Calendula, or Hamamelis either way. It is affirmed that gastric disturbance is a part of the disease, and not a complication. Its existence suggests reduction in the amount of food taken at one time, but over a dozen refer to the importance of its frequent administration, even to immediately after the paroxysm. Liquid diet is recommended by a considerable number of the practitioners. At least, it should be unstimulating and easily assimilable. Hot applications over the stomach, or any other convenient application of counter-irritation, may prove most advantageous by hastening the digestion of food. Cold liquid foods are sometimes useful. Ten grains of the Oxalate of Cerium with Antimonium crudum, Arsenicum, Carbo vegetabilis, Ipecacuanha, Tabacum are recommended. Fresh fruit-juices may be thought of at this point. Broncho-pneumonia is the most dreaded complication; Ipecac, Phosphorus, Tartar emetic, Veratrum viride, and Antimonium arsenicum are to be thought of in this connection. Brain difficulties are apt to require Apis, Belladonna, Bryonia, and Hellebore. It is much easier to prescribe for complicated cases than others. Vomiting is believed to be somewhat salutary, moderating the severity of the disorder. One gentleman has found most physicians have no confidence in vaccination as a cure for whooping-cough, and do not resort to it. Symptoms relieved in two or three days are not ordinarily cured until the end of twenty-four or twenty-eight days. One correspondent had suffered from the disease himself at five years and at twenty-five years, and had seen two others similarly afflicted. Ipecacuanha should be thought of when there is hemorrhage from the nose or chest. A child's death from diabetes succeeding pertussis is mentioned.

Concerning the treatment of parotiditis it is further suggested by twenty-seven that the diet be light (and nourishing); by twenty-two, fluid (but nourishing); by three, semi-liquid; by two each, bland and milk, while one demands absolute rest from food. Another simply restricts the diet, which yet another limits strictly to corn or oatmeal. On the contrary, one believes in a plenty of good, wholesome food, while yet another orders milk diet only in the case of gastric disturbance. Two physicians forbid cold drinks, and one each, vinegar and pickles, fats and oils, salty articles, and stimulating foods and drinks. Seven direct the avoidance of acids and acid fruits, except when the patient calls for them. Two direct that the bowels be kept open, and single individuals, each a plenty of water and cooling drinks. Six tell their patients to keep warm, and five, to avoid exposure; three, to rest; three others, to rest indoors, and yet three others, to rest in bed. One wishes to secure bodily quietness, but another permits exercise in one's room. One orders warmed fresh air, another dry warmth, and yet another, an even temperature in the room. Where there is both gastric and hepatic troubles, Iris versicolor is suggested, and for the typhoid

form, Gelsemium and Rhus toxicodendron. An involuntary diarrhœa frequently provoked is often controlled by Mercurius solubilis. One physician recommends the application of an ice-bag to the glands; another cautions against going out too soon; a third insists upon prolonged rest in convalescence; while a fourth directs the avoidance of reading at that time. One doctor provides "easily managed food for obvious reasons." An instance is mentioned where "pneumonia supervened upon mumps," exhibiting phenomena identical with other metastatic cases. Mercurius had no effect on the primary disorder, but the secondary indicated Carbo vegetabilis, which promptly cured both. A number of cases of metastasis to the brain are reported, in some of which Hyoscyamus and Belladonna were effective. An attack of one-sided mumps, accompanied by severe vertigo and semi-coma lasting two weeks, was apparently cured by Zinc phosphide 2x. In reply to an inquiry, I will state that I know no reason why an attack of this disorder on one side of the face should prevent a similar manifestation on the other at a later period. Neither of the disorders considered in this paper are prevalent in the North, though more cases of the former are found there than the latter.

My last circular of inquiry was the first to be regularly distributed to the Honorary and the Corresponding Members of this Institute. I have the honor to acknowledge replies from Drs. Thomas Skinner, of London; Frederic Delosea, of Frankfort; Oscar Hansen, of Copenhagen, and Alexander Villers, of Dresden, which have been incorporated in my report. When its first draft was well-nigh completed, yet another came to hand from Dr. Theodore Kafka, of Karlsbad. Unwilling that this testimony be lost to the profession, and justly estimating the interest therein of his American brethren, I venture, for the second time in twenty years, to violate my rule of strict secrecy as to the identity of my witnesses, and append an abstract thereof.

The remedies he has found most frequently indicated in the treatment of whooping-cough are, Veratrum album, Drosera, Ipecacuanha, Tartrate of antimony and Potassa, Belladonna, and sometimes Coccionella. Hepar sulphuricum is given near the close of the attacks if there be a loud rattling of mucus: these all in the third decimal dilution. The patients are kept in an equable temperature of 70° F., and, during a paroxysm, in a vertical position, the mucus being removed by a handkerchief. The body is rubbed with flannel dipped in cold water. If the air is not tranquil and dry, also during the three summer months, the patient remains at home. Boiled and roasted fruits, as well as acids, are to be avoided. The ordinary dietary is a cup of milk or of cocoa-shells, or of Kathreiner's malted coffee, or Schwabe's sanitary coffee with white bread or zwieback (biscuit without spice or almonds); for lunch, a potage and one kind of meat (not roasted goose, or pork, or veal), and afterward some green vegetables, alternating with rice, grits, or maccaroni, which should be boiled in bouillon rather than in water, as making them more readily digestible; three or four hours later, a repast similar to breakfast; for supper,

one meat-soup. For gastric complications he prescribes, most frequently, Arsenicum, Sepia, and China, sixth to thirtieth, commencing with the lower attenuation of each. A change of air or of climate he also sometimes finds very useful. In ophthalmic complications he recommends Belladonna externally and internally.

For mumps, Dr. Kafka finds Belladonna 6x, Mercurius solubilis 3x, Hepar sulphuricum 3x, Rhus toxicodendron 6x, Sulphur 30x, and Calcarea carbonica 10x, more generally indicated. When painful, an ointment of one part wax and eight parts almond-oil is applied on a very thin piece of linen, with apparent relief. During the eighteen years he has been in practice he has met with four cases of metastasis to the heart, for the relief of which he gave Belladonna, Mercurius solubilis, and Pulsatilla; also ten cases of metastasis to the testicles, where Aconite, Belladonna, Arnica, and Mercurius solubilis, each 3x, were administered. If parotiditis be painful, a liquid diet is ordered, with cold-water compresses covered with a dry woollen neckerchief, and renewable on becoming hot, after the manner of Priessnitz.

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OF THE

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The Powers and Limitations of Boards of Health.

BY EDWARD BEECHER HOOKER, M.D., HARTFORD, CONN.

At the birth of this nation its founders declared in their great manifesto:

"We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty, and the pursuit of Happi-

ness. That to secure these rights Governments are instituted among Men, deriving their just powers from the consent of the governed. That whenever any Form of Government becomes destructive of these ends, it becomes the Right of the People to alter or abolish it, and to institute new Government, laying its foundations on such principles and organizing its powers in such form, as shall seem to them most likely to effect their safety and happiness."

Our forefathers recognized the fact that in order to secure the right of life, liberty, and happiness it is necessary to establish government, that is, that these rights cannot be secured by anarchy on the one hand or by individual effort on the other, no matter how wise, persistent, or heroic that effort may be. And further, that the just powers of government are derived from the governed and from them alone. That is, for the good of the whole each individual must voluntarily give up a portion of his own power, that government, or society, may be immeasurably the stronger and safer for him and all of its members and secure for him, far better than he can alone, the privileges of life, liberty, and happiness.

The obstacles which render it difficult to secure these blessings are mainly ignorance, indolence, selfishness, intemperance, poverty, crime, and disease. Society is attempting to diminish them and to that end is studying them scientifically and directing against them the school and college, the church, the charity organization, the prison, the reformatory, the hospital, and the board of health. With this last alone are we concerned in the present discussion, but it is interesting to observe that the trend of modern thought concerning the others is that the best hope lies in scientific methods of collective effort, that individual attempt is comparatively futile and may even be harmful, and that while the evils of the present may be ameliorated in a small degree, salvation can only be attained by preventing those of the future.

The prevention of disease has in the past been more difficult than it is to-day. Herculean though the task still is, for, since the promulgation of the germ theory, sanitary science has taken long strides forward and the difficulty lies less in lack of knowledge of disease and the means of preventing it, than in the obstacles which the other evils of society, ignorance, selfishness, intemperance, poverty, interpose to the application of those means. And as these evils are most successfully combated by organized effort, so are certain kinds of disease best held at bay by the efforts of boards of health with the co-operation of physicians and the laity. These are the contagious diseases, and year by year their number is enlarged by the addition of diseases not before considered as of germ origin.

The statesmen who designed the form of government under which we should live, in order that we might enjoy the blessings to which we were entitled, had a most difficult and perplexing task. To make the nation strong, able to protect itself from foes from without and within, to bind the States into a union permanent and homogeneous and yet to preserve to the States their rights was indeed a problem well-nigh

insoluble. But patriotism and statesmanship overcame selfishness and narrow politics, and the nation was founded. The States gave up to the nation some of their powers and rights, just as the individual does to society, that they all, that is the nation, might be the stronger, the better able to repel enemies and to secure stable government, whose foundation should rest on justice and liberty. In the adjustment of powers and duties between the nation and the States the broad principle was followed that the nation should concern itself with those affairs which affected the Union, which were National, and that each State should concern itself with the affairs within its own borders. But should a State find itself unable to cope with disorders within its own domain it could call on the nation for help and the nation was bound to give it.

In a similar way, in its domestic affairs, each State recognizes that there are State affairs, which are best managed by the State, and local affairs, which are best managed by the county, or parish, town, or city, as the case may be. But in the event of the local authority finding itself unable to control disorder, it can call upon the State for aid and the State is bound to afford it.

There are affairs, however, not wholly national, nor entirely State, affairs which concern several States, and therefore beyond the jurisdiction of any one of them. These are inter-state affairs and must necessarily be considered national and within the control of the nation.

There are many causes of disease, which exist with greater frequency as civilization advances and the crowding of people into centres of population increases, and the diseases thus arising are for the most part avoidable. But the individual can do but little to protect himself from them. He can avoid becoming a nuisance himself and a source of danger to others, but he cannot protect himself from the danger which comes from others who are ignorant, careless, or without scruple. It therefore becomes necessary to have some intelligent authority, armed with the power to protect the community, to prevent the occurrence of these avoidable diseases and to limit their spread when once they have appeared. Such authority is the Board of Health, and it is needed just as the police power is needed to prevent and limit the occurrence of crime.

It is within the province of boards of health to take cognizance of all matters which menace the health of the community. The water supply, the food supply, including milk and meat, the sewering of streets and plumbing of houses are all within their province and should receive thorough inspection. The contagious diseases are especially a source of danger, and persons suffering from them should be under the supervision of health boards. It is not within the scope of this paper to attempt to define their duties in relation to the various contagious diseases, since the papers which follow will discuss them in detail, but there are certain general principles, applicable to the management of all diseases, which can be laid down. The good of society is superior to that of the individual, and that course must be followed which will do the greatest good to the largest number. At the same

time, while accomplishing this end, that course should be followed which will interfere as little as may be with the rights and convenience of the individual. It is not right that a whole community should be endangered by the acts or the neglect of a few persons, through ignorance, avarice, or carelessness. On the other hand, the community in protecting itself should not interfere with the business or occupation of individuals without just compensation. Nor should patients themselves be subjected to unnecessary restrictions.

Only such quarantine and for such length of time should be ordered as is positively necessary. This is not an easy matter to determine, and differs, of course, in different diseases. The last paper in this series confines itself to that subject, and will attempt to determine the danger period of the contagious diseases. The kind of quarantine also is of importance. Not every case of contagious disease should be hustled off to the wards of a contagious hospital, though such is the custom in some European countries. Nor is it always necessary to quarantine an entire house, if the same safety can be attained by shutting off several rooms securely. Other papers in this series will take up these points in detail.

Health boards, while doing all in their power to prevent and limit disease, should not interfere with the physicians in attendance upon the cases which may come within the cognizance of the health officers. Nor, on the other hand, should physicians interfere with the proper performance of their duty by the health officers.

While the services of boards of health, especially local boards, will be needed in various directions, their most constant and important work will consist in preventing and limiting the occurrence of contagious diseases, and in pursuance of this laudable effort they will encounter their greatest opposition. In the ordinary course of events the local health officer or board, as the case may be, will be able to manage the cases of contagious diseases so as to keep them in check. But epidemics not infrequently occur, and epidemics have an unpleasant way of ignoring town and county lines and spreading from one community to another, so that it may be necessary for the State board of health to step in and assist, or assume control of the measures which are undertaken to stop the spread of the devastating plague. For it is reasonable to believe that a central authority, if equally intelligent, being more impersonal and less influenced by local pride and jealousy, and acting in a more comprehensive manner upon a uniform method of procedure, will accomplish better results, and more quickly, than will several independent local authorities, jealous of each other and each anxious to promote, first of all, the welfare of its own community, acting, perhaps, in different ways. There can be no question about it. In ordinary times the police are able to preserve order and suppress crime, but, should riot or insurrection arise, it may be necessary to call on the State for assistance, and the National Guard is called out and rarely fails to restore order and conquer the rebellion. An epidemic is an insurrection, and the State board of health is the militia.

But epidemics have a still more unpleasant fashion of ignoring State lines and spreading from one State into another. What then? Does not the same reasoning apply, and is not a larger central authority, well equipped, impersonal, powerful, better able to handle the situation than several weaker ones, acting without concert, and each willing to harm the neighboring State if only its own can be helped? There can be no question about it, the National Board of Health should step in and assume control. But we have no national health board. If the riot or insurrection gets beyond the control of the State troops, the United States Army comes to the rescue, and in a few days the warfare is over. Why should not disease, which is more deadly than riot or insurrection, or the wars of nations, be combated by the most powerful means within our reach?

We maintain an expensive navy—and we are justly proud of it—in order to repel foreign invasion. It is the navy of the United States of America, not the navy of this State or of that, or any group of them, but the navy of the Union. We are fortifying our harbors and coasts, spending millions upon millions, hoping to be able to make them impregnable to attack, and the United States is doing the work. Yet we are usually at peace with all the world, and, except for the present little scrimmage with Spain, have had but one war with another nation in eighty-six years. But the most dangerous foes that reach our shores do not come in iron-clads, or, if they do, powder and shell are of no avail against them, and with them there is never peace, but eternal warfare. We are exposed to invasion by epidemic disease at all times, but especially are we vulnerable during the present year, when so many Cubans have come to our shores and such large numbers of our soldiers are going to Cuba, and, let us earnestly hope, are coming home again, too. How can our coast be most securely protected? By each State concerned handling the matter in its own way, or by the United States taking control of the whole business and managing it, as it does the customs service, the light-house service, and the life-saving service? There can be but one answer—the United States should do it. The question is not, therefore, Shall the United States undertake the work? but, How shall the national Government do it? That question is now agitating Congress as much as anything can agitate it during the more exciting discussion of war measures.

There are two different plans before Congress at the present time, both having the same end in view—the creation of a central, national authority, having power to establish a system of quarantine and to provide measures for security against the introduction and spread of contagious and epidemic diseases. One of the plans is embodied in the bill known as the Caffrey bill, which grants additional powers and imposes additional duties upon the Marine Hospital Service, virtually making it a National Board of Health, without, however, creating a new bureau or department. The other plan is embodied in a bill which creates a new Bureau of the Treasury Department, a Bureau of Public Health, which shall consist of a president, who must be an

expert sanitarian and learned in medicine; the supervising surgeon-general of the Marine Hospital Service; the surgeon-general of the army; a lawyer from the Department of Justice, and one commissioner from each of the nine sanitary districts into which the country is divided by the provisions of the bill, making a board of thirteen.

In each bill the service is under the authority of the Secretary of the Treasury, and is a part of the Treasury Department. Attempts have been made in the past to have a Department of Public Health created, with a secretary having a seat in the Cabinet. This ambitious scheme has never succeeded, and the prospects are that it will be a long time before it does. But there does seem to be some prospect of one or the other of the two bills described being enacted. There has never before been so strong a sentiment in favor of legislation which will establish national sanitation in some form. That there is urgent need of such national control of sanitation I have attempted to show. Indeed, the reasons for its establishment are so numerous and cogent that no really valid arguments can be brought against them. The difference of opinion should exist only as to the best methods of accomplishing the desired result. It will be urged against these measures, or against any measures which are brought forward to establish national control of sanitation, that they give additional power to the old school, and that such power will possibly, even probably, be exercised to the annoyance and detriment of homœopathic physicians; that the old school will get control of all the machinery, hold all the offices, and Homœopathy will be on the outside more than ever. Such arguments are raised in objection to all boards of health, and deserve to be considered. In the first place, as has been already stated, the greatest good of the greatest number is and should be the controlling rule of action. If the community can be better protected from disease by the agency of health boards, then health boards should be organized and armed with necessary power, whether Homœopathy is aided or injured. At the same time, every effort should be made to have the boards of health composed of fair-minded, honorable men, who will exercise the power intrusted to them without partiality or prejudice. Public sentiment should be educated and appealed to, and much can be done by agitation in this way. Almost every argument that can be brought against the usefulness and necessity of boards of health has its foundation in the mal-administration of the board or of some official. That is because unfit men are in office, and not because the principle of public sanitation is wrong. The fact of it is, the trouble largely comes from politics.

Boards of health are not alone in being thus harmed. Hospital service, prison commissions, common councils, legislatures, Congress itself, are not what they should be, because of the influence which we term politics. When we speak of politics, we do not mean politics in the correct sense of the term, which is virtually the science of Government; but politics as it exists to-day, especially in our large cities, where private gain and selfish ends are more considered than public

good. But because administrative and legislative bodies are not what they ought to be we do not think of abolishing them, because they are necessary to our political life. We should attempt to make them better, that they may more correctly fulfil the ends for which they were instituted. In like manner, we recognize that boards of health are sometimes inefficient and stupid. The positions in them are often filled by men who are appointed because of the influence which they are supposed to wield at elections. Admitting every argument that can be raised against boards of health because of mal-administration, the proper course is not to attempt to abolish them, but to attempt to make them more effective, composed of men of high character and ability, and, when they are doing good work, to cordially stand by them.

The arguments against national control of sanitation are based upon the assumption that the administration will be unfair and prejudiced, that politics rather than fitness will control the appointment of the officials. Even should this be so, the need of a National Board of Health, or of a bureau having substantially the same powers, is so pressing that, without question, such national sanitation should be instituted, even though its administration be imperfect. Of the two measures before Congress, I am in favor of the Caffrey bill, which enlarges the powers and duties of the Marine Hospital Service. I believe it is better policy to increase the powers of this service rather than to create an entirely new bureau, with new sets of officials and a membership so large as to be unwieldy. We can never hope to cope successfully with yellow fever or cholera or wide-spread epidemics of any kind so long as quarantine and other protective measures are left to the varying and often antagonistic measures of the different States whose borders are affected. It is our duty as physicians, as members of that great and noble profession to which the health and lives of the people are intrusted, to throw our influence in favor of the most effective method of national sanitation than can be obtained. We should forget for the moment that we are Homœopaths, since no question of therapeutics is involved, but remember only that we are physicians. As citizens, we should be patriotic enough to desire the welfare of the whole country rather than that one section might be temporarily benefited at the expense of others, and we should therefore throw the weight of our influence as citizens in favor of National Sanitation.

There is no reason why skilful physicians and sanitarians who happen to believe that disease is best overcome by the homœopathic method of treatment should be excluded from Boards of Health, municipal, state, or national, from insurance companies, from the marine hospital service, or from the army and navy, and we should use every honorable endeavor to influence public opinion, legislative bodies, and administrative officers, to remove this unfair restriction. Yet, if it is not removed, we should, nevertheless, be unselfish and patriotic enough not to attempt to interfere with the usefulness of these various organizations, although we may be excluded from official participation in

their labors. It is my firm belief that in due time, if we labor constantly to fit ourselves to fill skilfully the positions which we desire to attain, the obstacles will in large measure be overcome, and the present unfairness will disappear; and it is my earnest hope that the time will come when there will be no such divisions in the ranks of medicine as now exist, that every man will heal the sick in the method that his judgment tells him is best, and that the standing of a physician, in the profession, will be governed by two qualifications only, his character and his ability.

Discussion.

Sarah J. Millsop, M.D., Bowling Green, Ky.: I have only words of commendation for the able address just listened to. Every proposition put forth contains logical reasoning, and convincing proof, that Local and State Boards of Health are a necessity.

That they have been the means, in numerous instances, of preventing the spread of contagious and infectious diseases, and of stamping out epidemics after they had gained a foothold is incontrovertible. We would not wish to see the State or Local Boards of Health done away with; we could illy afford to spare them, for as our chairman says, as individuals we need official and intelligent protection from the class of people who are careless, ignorant, or unscrupulous, and who do not know, or do not care, if they sow broadcast the seeds of deadly infection.

Yet, as the essayist truly says, "Boards of Health are not what they should be." The members, he might have added, are nearly always men who have received appointment because of political influence. and not for their scientific attainments or knowledge of sanitation and hygiene.

In a case of which I have personal knowledge the Secretary of a State Board of Health was in attendance upon a typhoid patient; the dejections of that patient were thrown over a fence into a vacant lot. without any kind of disinfection whatever.

A well-known worker in this Institute could tell you, were he here, of being called to the home-town of the Governor of his State to see a young lady who had been given up to die by two allopathic doctors. She was suffering from pyæmic abscesses, following typhoid fever. The fever, it was conceded, had been contracted from the dejections of some typhoid patients in a negro cabin close by, the discharges from whom had also been thrown on the surface of the ground without disinfection.

While the town rang with the praises of the Homœopath he and his friends asked the Governor to appoint him to an existing vacancy on the State Board of Health, but instead, the position was given to one of the doctors who had left the patient to die, and the same one who had been in attendance on the negroes in the cabin. Hence, I think. we have conclusive evidence that, in some States at least, medical skill

and a knowledge of the simplest laws of sanitation are not requisite to become a member of a Board of Health.

But why should these positions usually be filled by medical men? Most of them lead busy lives; and even when well qualified for such positions they cannot afford to leave their professional duties to go to a distant part of the State in the attempt to cope with a malignant epidemic, for the mere honor of holding a position on the State Board.

I suppose it is in other States as in my own State, it is only the Secretary of the Board who receives a regular salary.

I am glad to find that in several of the States the custom of having only physicians on Health Boards is not observed; but distinguished scientists and educators consent to serve their fellow-citizens in this manner. New Jersey has on her board six laymen and four doctors.

In Connecticut, Louisiana, Maine, Michigan, and New Hampshire they are equally divided, while in other States there are from one to three laymen. One thing in favor of physicians being appointed as guardians of the public health is that, as a rule, the laity have more confidence in their medical advisers than they have in Boards of any kind. They think their beloved family physician wise in matters pertaining to health, and ask him for the best known means to guard against infectious diseases. So my proposition would be to educate more thoroughly our medical students in hygiene and sanitation, that they may enter into practice well prepared to give practical advice for the preservation of health.

Another proposition would be to limit the number of members constituting a State Board of Health. Two or three good men, or women, might be selected without regard to political affiliation, who are well qualified for their duties, not only in the essentials of scientific attainments, but in the equally essential quality of common-sense.

Let their respective States pay them a salary sufficient to enable them to devote all needed time and thought to the—shall I say this most important work in the world—the prevention of avoidable diseases.

Formerly I had innocently supposed that State Boards of Health were created for the purpose of thus educating the laity and preventing avoidable diseases as well as for the purpose of controlling the spread of epidemics. Indeed, the statute of one State of which I have knowledge is explicit on this matter. The section begins by saying that the Board shall have general supervision of the health of the citizens, and endeavor to make intelligent and profitable use of the collected records of the causes of sickness and death among the people. The entire statute or section is of like purport; but in reality the Board of Health of that State seems to feel called upon to expend all its energies on medico-politics: the supervision of medical colleges, the enactment of medical laws, etc. It has virtually constituted itself an examining board.

I have never been in favor of a National Board of Health with a Secretary in the cabinet. It is not for the reason that I come from

a section of country where there was such a warm argument in favor of State-rights, over three decades ago. Neither is it wholly for the reason that I dislike to have the medical profession to be involved in so much cumbersome machinery and "red tape," but for the fear of partisan influence and discrimination against the weaker sects in medicine where too much power is placed in the hands of one party.

I know a physician, who, as a politician, has but few equals; in fact, I think, he even excels a few politicians in this Institute, who shall be nameless. He has been a zealous worker for the establishment of the National Board of Health, and had this measure become a feature of our National Government, he was even unselfish enough to offer his services, with the strong expectation of being able to fill the newly created chair in the cabinet, should his plans work out successfully. I know, from his own statements, that his chief aim was not the more effectually to eradicate disease, but to compel all medical diplomas to be brought to Washington for registration. The measure brought up at the last meeting of the Interstate Committee proposing to present a bill to Congress for impartial federal supervision of medical colleges by the three dominant schools would, of course, be the only National supervision required. But in my opinion it would be unwise for us to entangle ourselves in such a maze of medico-politics. For my own part I see nothing to be gained by too much medical legislation.

As regards the Caffrey bill now before Congress I am more favorably disposed to it than to any other federal measure of this nature. At this time with "our scrimmage with Spain," as Dr. Hooker puts it, the work of protecting or stamping out epidemics would naturally fall on the Marine Hospital Service. The need of intelligent federal intervention was made more apparent to me by two incidents which occurred in my own State within a year. Last summer when the yellow fever prevailed in the South and the inhabitants of many towns and cities were fleeing North, there was a great flourish of trumpets and a great show of disinfecting cars, persons, and baggage, at a point a few miles below the city in which I live. This was done under the sanction of our State Board of Health, by two young men just out of a medical college, both being sons of prominent members of the Board.

The liberal salary paid soon consumed all the State funds appropriated for this purpose, and the disinfecting stopped before the real rush of refugees began.

Later, when sufficient transportation could hardly be secured to carry these badly frightened people North, and when car-loads were left with us and at other places in the State, we were left wholly at the mercy of the yellow-fever germs.

Later an epidemic of small-pox developed in one of the mountain towns. Like the yellow fever of last year, it was a mild type. Had it been intelligently coped with at the start, the epidemic could easily have been averted. The youthful sanitary inspector was again put in command. He issued manifestoes right and left, but small-pox is no respecter of persons, and the disease marched on, spreading consternation in all that region, although few deaths were reported.

The people became indignant at what they considered lack of management, and federal aid was invoked. A physician of the Marine Service was sent to the rescue, and he soon brought order out of the chaos. He stayed until there was no further need for his services, taking all precautions as to burning and disinfecting buildings before leaving. While I, too, would be unselfish enough to give up the claim of the homœopathic school to just recognition on the various health boards, did the cause of humanity demand that only the members of other schools should be allowed to do this work, fortunately such is not the case. As a school it is conceded that we excel in our knowledge of sanitation and in the observance of hygiene.

We are in every way fitted to fill such positions, and it is not only our right, but our duty to demand them. In most States men of our school hold positions on local and State Boards of Health. I personally know of many of our ablest men who are engaged in this work. We can point with pride to the fact that in two States, namely Pennsylvania and in this progressive State of Nebraska, two of our most prominent physicians are Presidents of their respective State Boards of Health.

The Powers and Limitations of Health Boards in Relation to Yellow Fever and Cholera.

By Henry R. Stout, M.D., Jacksonville, Fla.

This subject is one full of interest and of the greatest importance to the people of this country.

Yellow fever and cholera are two diseases which, more than some others, can be controlled by the enforcement of proper sanitary rules and regulations. They are pre-eminently filth diseases. The ravages of these diseases have been very much limited, within the past twenty-five years, by sanitation. In the early part of the century, yellow fever frequently prevailed in places that, to us of the present time, would seem to be too far north to be in danger. It has prevailed in New York, Boston, Providence, Philadelphia, Norfolk, and other northern cities, but sanitary sewerage, drainage, and a pure water supply have banished yellow fever to its more natural habitat in southern climes; and cholera, which for many years was a scourge, not only in this country, but in Europe, has almost ceased to exist.

The cities of our Southern States are rapidly improving their sanitary methods. Owing to the greatly depressed condition of the South and the impoverishment of the people consequent on the Civil War, these improvements have been adopted more slowly, but they are fast "falling into line." I confidently believe that in a comparatively short time yellow fever will become as infrequent a visitor to the cities of the South as it now is to the cities of the North. One of the blessed results of our war with Spain will be the opportunity to cleanse that plague-spot of the world, the harbor of Havana.

So long as the island of Cuba was under the dominion of Spain, it was useless to expect the Spanish Government to expend any money for that purpose. Too many officials had to be provided with lucrative positions, to waste money, as they would consider it, in cleansing this cesspool. This could easily be done by connecting the lower end of the harbor to the ocean by a canal, thus giving a free circulation of salt water in the harbor. The harbor is completely landlocked, and is filled with the drainage of Havana for centuries. The water is so foul that fish cannot be found in it, and it certainly is an awful sepulchre for our poor men of the Maine.

The powers of Boards of Health in dealing with yellow fever and cholera should be well-nigh autocratic, and their power should be limited only by the exigencies of the occasion.

People as a rule, must be forced to keep clean. A man may take

a bath every day, and yet his premises be in a filthy condition. The Board of Health must step in and force him to keep them clean, under a severe penalty.

There can be no doubt but that if the sanitary matters of the country were under the control of a National Board of Health, yellow fever and cholera would cease to be a menace to the life and health of the people, and to the commerce of the country. As it now is, each State has laws and regulations which conflict with those of adjoining States. If yellow fever prevails in one State, every other State contiguous instantly declares quarantine, inflicting a vast amount of inconvenience and loss to the community, commerce becomes paralyzed, and merchants and transportation companies suffer serious damage. The prosperity of cities and towns receives a severe blow, and even States have their development greatly retarded.

It is said that it requires at least five years for a city to recover its former prosperity after an epidemic of yellow fever. Such being the case, how much better would it be if the existing State laws were wiped out, and the question of dealing with threatening epidemics of yellow fever or cholera was in the hands of a national board. In this way the laws would become uniform, and much less hardship would result.

As an illustration of the condition that would be produced, I would cite my own State—Florida. Previous to the yellow-fever epidemic of 1888, each county of the State had its own Board of Health, with rules and regulations, giving them authority to enforce quarantine, etc. The consequence was that during several epidemics of yellow fever a person could not pass from one county to another without a pass, and liability to be put off a train at a county line, or suffer other vexatious annoyances. This condition of affairs became so intolerable that, in 1889, the Governor called a special session of the legislature to pass laws establishing a State Board of Health. This was done, and the result has been vastly beneficial. The State Board of Health and the State Health Officer have supreme authority. Dr. J. Y. Porter, the State Health Officer, has the entire confidence and support of every resident of Florida. Under his wise administration there has not been a single case of yellow fever in the State since 1888. Until the outbreak of the war with Spain, commerce and travel to and from Havana have continued through the summer, and not a germ of yellow fever has been imported. No person was permitted to come aboard the steamers for Tampa unless he could satisfy Dr. Burgess, the Inspecting Officer of the United States at Havana, that he was a native of Cuba, or had had yellow fever. On the voyage the baggage was fumigated, thus destroying the possibility of importing germs. The steamers were kept in the highest sanitary condition.

The State Health Officer has the power necessary to enforce sanitary regulations in all cities and towns, through proper local officers. I will venture to assert that if every Southern State would copy the laws of the Florida State Board of Health, and not permit the Marine Hospital Service to have charge of their quarantine, the danger from

yellow fever would be reduced to a minimum. It is considered that the Marine Hospital Service is responsible for an epidemic of yellow fever in Tampa in 1887, which resulted in the epidemic of 1888 in Jacksonville. Also, for the epidemic of 1893 in Brunswick, Ga., and the epidemic of 1897 in New Orleans, Ocean Springs, Mobile, and many other towns.

I contend that the control of the sanitary matters of the country should be vested in a National Board of Health, with a State Health Officer in each State, who should have under him health officers in each city and town. Should yellow fever break out in any city, the national board would be the only authority that could enforce quarantine and inspection, thus doing away with the prevailing shotgun quarantine which each city, county, and State enforces against every other city, county, and State. It would prevent all the senseless and unreasoning panic with which people become infected whenever a case of yellow fever occurs, and which I believe to be the cause, in a great degree, of epidemics.

Discussion.

C. R. Mayer, M.D., New Orleans, La.: The points brought out by Dr. Stout's paper are all well taken, one in particular being of such vast importance that it should receive the most serious consideration and the indorsement of the Institute as a body; I refer to the recommendation to establish a National Board of Health.

The outbreak of yellow fever in 1897 demonstrated the absolute inability of State or county Boards of Health to cope with the fears of a panic-stricken people. At that time shotgun quarantine held high carnival, the rougher and most ignorant element of a community forming the force of guards, making laws unto themselves, and enforcing these mob laws at the point of a gun. By such methods business was paralyzed, commerce by land and water suspended, even mail communication discontinued for weeks in many towns; in fact, utter demoralization prevailed, resulting in the direct loss of millions of dollars to the States involved, the indirect loss in checking the flow of emigration and capital to the South being too great to estimate.

And what was the reason for all this. A mild outbreak of yellow fever occurring late in the season, with a recorded mortality of about eleven or twelve per cent., the actual mortality probably not being more than four or five per cent. when we consider that more than half the existing cases were not reported.

Unquestionably, State, county, and municipal health boards are useful and necessary organizations for the teaching, directing, and enforcing of sanitary measures for the public weal, and should—within their jurisdiction—be endowed with almost unlimited powers; but the greatest danger may lie just outside their jurisdiction, and when this is the case, their impotence is expressed by the barbarous shotgun

quarantine with all its attending evils. It is needless to talk of reciprocity between State boards. "Self-preservation is the first law of nature," and, as has been proven, compacts between health authorities are broken the moment pestilence threatens, and the only solution of the problem is the establishment of a National Health Board, clothed with autocratic powers, backed, when necessary, by all the moral and physical forces the Federal Government can bring to bear. Then, and only then, will the evils following the announcement of yellow fever and cholera be reduced to the minimum, and I would urge it as a duty that the American Institute owes its country, that it officially memorialize Congress strongly advocating this necessary measure, not forgetting to demand in the formation of such a board the proper recognition of the most advanced sanitarians of the country—the Homœopaths.

PEMBERTON DUDLEY, M.D., Philadelphia, Pa.: The shortest and best way for me to discuss these two papers would be to simply say I approve of almost every point made in both of them, and yet I am not sure that I understand fully one or two suggestions and statements made in Dr. Stout's paper on the relation of Boards of Health to cholera and yellow fever. I believe in home rule, and in dealing with local difficulties by local legislation and local administration whenever possible. This will apply to the township as in Michigan, to the borough as in Pennsylvania, to the city as it does everywhere, and to the State as it does almost everywhere in this country—each within its own jurisdiction. In Pennsylvania, of which I know more than of any other State, the borough Board of Health is, within its own jurisdiction, supreme. So is the city board. The State board has certain supervision over the State, but chiefly in regions where there are no local boards. Its jurisdiction in boroughs and cities having Boards of Health is only when the prerogatives of the local boards become from any cause inoperative. How they may become inoperative one can only understand by a little experience. Some very curious things happen in connection with the administration of health laws. For instance, some time ago a complaint was received by the State Board of Health in Pennsylvania with reference to a nuisance in a certain borough, in the nature of foul water running along the street and polluting the atmosphere. The citizens appealed to their Board of Health. They discovered that this foul water came from a drain which opened out upon the line of the borough, but which had its source in the adjoining borough. They could not go over into the other borough and suppress the nuisance. They appealed to the adjoining borough to abate the nuisance, and they replied that the water ran through a terra-cotta pipe until it reached their borough boundary, and that there was no nuisance within their jurisdiction. The State Board was appealed to as the only authority having power to settle the dispute and abate the nuisance.

Other troubles are liable to arise all the time. In Philadelphia, when cholera threatened us through the harbor of New York a few years ago, I remember that the newspapers issued their flaming head-

lines about it, and devoted whole columns about the likelihood that it might find entrance into the port itself. These newspapers created a panic; nobody else did it. The discovery at last was made that a number of cases actually existed in the city of New York. Instantly the newspaper panic ceased. Within twenty-four hours not a flaming headline could be found in the papers. The Pennsylvania Board of Health thought they had a serious problem to deal with, and went to work vigorously to guard the now imminent public peril. Then the Philadelphia and New York City newspapers denounced the Board of Health for creating a panic. What right had the Board of Health to interfere with the interstate commerce? was the legal question involved. I do not know whether or not the United States Government would have interfered had it become necessary for the State Health organizations to take the work of railway sanitation into their own hands and stop trains, sidetrack cars, disinfect cars, burn freight or baggage, or do anything else necessary. Such work might seem like interference with interstate commerce—a subject wholly outside of State jurisdiction. But this was not the question raised by the newspapers. They criticised us for taking proper precautions; but the panic of which they complained was altogether of their own creation.

Home rule for home troubles; but if I understand Dr. Stout's paper, he insists that the National Government shall assume sole sanitary control—not only general, but local also—of the two diseases of which he treats. If so, I do not agree with him. The idea of a National Board of Health commends itself to all homœopathic physicians who have given any study to the question of sanitation. If it is necessary to have municipal boards, why not State Boards also? And we ought to have a National Board, surely, for the protection of our country against diseases originating in foreign countries, and for the protection of our sea-coast lines. How are these needs being met now? The question of interstate relationship is met by agreement between the different State boards, through a temporary organization known as the Interstate Conference of State Boards of Health. They agree upon certain measures to be adopted in certain conditions. They try to work as harmoniously as they can, but they work under difficulties. There are sometimes, then, very good reasons why we should have a National Board of Health, but what about local protection? We have had recently an example of the necessity of local protection in the presence of a National Board. Some time ago the quarantine plant below Philadelphia, on the Delaware River, was practically abandoned, because at the mouth of the Delaware River a national quarantine station had been established, with another at the head of the bay. In connection with them, Pennsylvania established the quarantine station below. Had it not been for the State quarantine station in addition to the national quarantine stations, yellow fever would have gotten into our city, as a ship carrying yellow fever had passed the two national quarantine stations and was only stopped by the local quarantine officials.

J. H. McClelland, M.D., Pittsburg, Pa.: I want to make a remark or two which will, I think, commend themselves to most of the members of the profession present, and I preface my remarks by the statement that, in my experience, the sanitary laws have been administered by intelligent and painstaking men, and have generally been successfully administered. Of course, the executive officer of a Health Board must be a thorough sanitarian, and, as a rule, I have found them thoroughly qualified in their profession.

In our form of government we recognize the Township, Borough, City, and State, as well as the Nation, and in the administration of laws of all kinds, sanitary as well as police, we must have authorities which govern in each of these individual cases. We cannot get along without local Boards of Health, and it would be useless for me to argue to the contrary with anyone who knows the workings of such boards. State Boards of Health also have their well-defined functions. There is a field where the local Boards of Health have no jurisdiction, nor ought they meddle, and *vice versa*. Quarantine should be in the hands of the National Government, without a doubt. It is absolutely absurd for a State Board of Health to administer quarantine laws on our seaboard.

With regard to the stoppage of vessels at State quarantine stations, I believe the practice is all wrong. The members of our State quarantine boards are very able men, but their function is wrong. Quarantine is International; it deals mainly with people from abroad, and the questions to be dealt with must be handled by our diplomatic service. There are also questions of interstate sanitation which should be in the hands of the national authorities. Yellow fever should be under national jurisdiction. I feel sure as a knowledge of sanitation gets abroad it will become more and more evident that the National Government should have the authority to deal with interstate as well as international questions.

Charles E. Fisher, M.D., Chicago, Ill.: This is a matter in which I took more interest when I lived in the South than I have been giving it since. I desire to commend most heartily the very skilful presentation of the subject that has been given us by Dr. Hooker. The only point upon which I can differ with him is in relation to the Marine Hospital Service. I have lost all confidence in that department to save us from epidemics. The Marine Hospital should protect our coast; it has been in service for many years, but has failed in many instances to save us from epidemics. The first good work that was done in this matter of yellow fever was accomplished when there was a National Board of Health, and but for the parsimony of Congress a National Board of Health, with two homœopathic members, would doubtless have continued to operate for a long time. It throws all the expense of keeping an epidemic out of the United States upon any single commonwealth, which is unfair. And, likewise, if it should be necessary to destroy baggage and freight, it seems to me that it is

exceedingly unjust that any single State should have this expense to bear. The Government of the United States is the only authority that can possibly take charge of this matter, as it should be taken care of, comprehensively. In the Consular Service at the present time we have a medical department, and in many instances epidemics are prevented by this means; and we should have a national board because it is the only logical and just and right solution of this important problem.

The Powers and Limitations of Health Boards in Relation to Phthisis.

By Thomas C. Duncan, M.D., Ph.D., LL.D., Chicago, Ill.

One of the most difficult problems before health officers to-day is that of managing consumptives—the tuberculous.

1. Some high in authority in health matters claim that tuberculosis is a highly.infectious disease, and that all cases should be quarantined.

2. Others look upon it as a hereditary disease or one due to malnutrition, climate, indiscretions, or accidents of life, *e.g.*, as a result of bronchitis, pneumonia, pleurisy, etc.

3. The deep-rooted opinion of the medical profession all over the world is that "Change of climate is the best remedy for consumption." (That was brought out in the many papers and discussions at the World's Congress of Medico-Climatology, in 1893.) How can the poor fellows or even the Tsar be allowed to "change climate," if quarantine is to be enforced?

4. The general impression is that the disease is conveyed by the sputa, hence we see placards reading: "Spitting on the Floor is Forbidden. By order of ——— Health Commissioner." A crusade is made against "spitting on the streets," except by women who have just had a tooth pulled. (Whether tobacco-juice kills the bacilli we have no report as yet.)

There is a conflict of opinion as to whether the bacilli in the dried sputum can be galvanized into life even if inhaled.

I once went to Washington to testify that I thought it would be wise for the Government to set aside certain reservations in the salubrious Southwest, where poor consumptives from the overcrowded East could be sent. A prominent physician appeared before the same congressional committee and declared that dried tuberculous sputum was inert. The bill failed of passage. (The committee consisted of Senators (Dr.) Gallenger, of New Hampshire, Harris, of Tennessee (now deceased), and White, of Louisiana, now on the supreme bench.)

5. A. We are assured that the white blood corpuscles, the leucocytes, are phagocytes; that they devour or encyst the bacilli and so protect us, or we would all be dead men within a year. B. From Denver—that beautiful city set on a hill—(a citadel of consumptives) comes a report (via Mexico City and the American Public Health Association) that there is a prebacillar stage, shown by a preponderance of the lymphocytes. (I take it that these corpuscles are evolved from the reabsorbent glands.) C. From New York and Boston come other

bacteriologists (Dr. Cutler), and tells us ("American Medical Association Reports" and *Scientific American*, April 9, 1898) that it is the vinegar yeast (*Micoderma aceti*) that destroys the leucocytes (and also that "the vinegar spores are the supposed tubercular bacilli!"). The inference is that the consumptive is being killed by the vinegar parasite, and that tuberculosis is an ingested disease.

If either or all of these modern views (A, B, C) are correct, then it would seem that the lymphatics are at fault, and this condition again may be hereditary or acquired.

6. The advocates of the vinegar theory also claim that slop-fed cows convey the vinegar bacilli in the milk. That explains to their minds why slop-fed cows are tuberculous, and why their milk develops tuberculosis in milk-fed animals and man. Here quarantine can be effective. Pure milk comes from pure food and clean, healthy cows. Milk inspection for the sake of posterity should be thorough, rigid.

7. The infection theory, concerning the transmission of consumption from man to man, has steadily grown, however, from many demonstrated cases in families (Boston) and houses (Philadelphia) until Health Boards have deemed it wise to attempt quarantine measures.

The State Board of Health of Michigan (calcareous) and that of New York City (carbonaceous) have declared that "Consumption is an infectious disease;" and in the latter city, a quasi restriction has been imposed. Medical journals and the press of California and Colorado have discussed the advisability of limiting the influx of consumptives.

In 1891 a man informed me, in El Paso, that he hoped that I would not influence consumptives to come there, for he "had moved from two 'health resorts' to get away from them." When the Invalid Air Association, of Boston, tried to get from the Government the military reservation of Fort Marcy in Santa Fé (a city that, so report says, "never had an original case of phthisis"—Dr. Eggert) the citizens objected to having a consumptives' home located in their midst. Still we are told that most of the original settlers of Colorado were consumptives. The popular fear of "catching" this disease is growing. I know a man who will not sleep on any of the hotel pillows in Denver for fear he will get this disease. (He will likely die of apoplexy instead.) Notwithstanding, physicians go boldly and bodily to Denver, evidently without the least fear of infection.

Because of the growing popular fear that the air of the mountains and hotels may become infected the health authorities are appealed to, to prevent consumptives travelling about—sowing the seed like thistles perhaps. How is not explained. Still bacteriologists tell us that the bacilli of tuberculosis are difficult of culture.

8. Objectors to quarantine ask where will it end? Can no consumptive leave New York or New England? Cannot they cross the States of Michigan or Pennsylvania or Nebraska? If barred from New Mexico, Colorado, and California, where can old-fashioned physicians who believe in "Climate Cure" send their consumptive cases? The conservative South raises no objection; they will be welcome there—

while their money lasts. Would any Board of Health have dared to try to prevent Jay Gould travelling from New York to El Paso over his own road in his own private car, even when in the last stages of tuberculosis pulmonum? If the railroads refuse to carry those who cough, some will travel overland as in former days, while others will bring suit, and the medical army will be divided in the fight, as witnesses. "What do you know about tuberculosis being an infectious disease?" It is a question if this position of the Health Boards of Michigan and New York would hold against a suit for damages. If it will, then will not the profession and the railroads be liable to prosecution for "criminal negligence?"

What is best in the premises? What is possible may not be expedient, for the want of legal backing. To enforce an ordinance or law of "quarantine against consumptives" there must be stronger medical and public sentiment to support it, it is believed.

It is a practical question if caution to observe aseptic methods in the management of the tuberculous is not as far as health officers should go, at present. Upon the public mind might be stamped this warning:

Carelessness increases consumption.
C. I. C.

Discussion.

William Lawrence Woodruff, M.D., Phoenix, Ariz.: The paper just read by Dr. Duncan is somewhat negative in its conclusions, pregnant in questions asked, but not positive in its answers.

The solution of this whole subject depends on the answer to one question; is tuberculosis contagious? If this question is answered in the negative, then this disease does not come under the power of the Health Boards. If answered in the affirmative, we must conclude the bacteriologists are right, that the tubercle bacillus is the contagious element in this disease, that the diffusion of this germ is a menace to the community at large, and that this disease does properly come under the authority of Health Boards. That in so far as public and professional sentiment will uphold them and aid in the enforcing of their rulings, they should treat it in the same manner as they do other contagious diseases.

It may be impossible to demonstrate beyond possible question, whether the bacillus tuberculosis is the cause, or only the universal accompaniment of tuberculosis.

It may be impossible to demonstrate beyond a doubt that tuberculosis is or is not contagious. One thing is certain, it may well be denominated a scourge. I am of the impression that the majority, both of the profession and the laity, believe that, to a greater or less extent, tuberculosis of the lungs is contagious. It goes without saying that this belief, and the fear, amounting in some communities almost to a panic, increases the public danger. If for no other reason, it would seem the wise course, until the contrary is proven, to act as if

it were contagious, to insist on Boards of Health taking such action as public opinion would uphold in enforcing the ordinary rules as applied to other contagious diseases.

C. B. KINYON, M.D., Ann Arbor, Mich.: Now, as to whether consumption is contagious or not. For the last sixteen years I have been a firm believer in the idea that consumption is contagious. I have in mind now four or five different families, and in each case the father and mother are living and perfectly well. These families, in the aggregate, have lost twenty members from consumption. I have always noticed this fact, that the oldest consumptive would be nursed by the one next younger, and in that way the one doing the nursing took the disease and died. I followed this through, and was thoroughly convinced that it was contagious. I could not say to these fathers and mothers that the child should not associate with the others. If you do that you are placing yourself in an embarrassing position. What I did say was this: Consumption, beyond a peradventure, is contagious. I would show them the germs with the microscope, and explained that I could propagate them from one flask to another. The fact is, we can develop the germs from one flask to another indefinitely. And they can be carried from one person to another.

One word about the States in which the climate is good for consumption. If I lived in a State where the climate was good, I should expect such people to come there, and would not complain.

L. B. RICHARDS, M.D., Chicago, Ill.: I would like to call your attention to an article published during the last twelve months in the *American Journal of the Medical Sciences*, published in Philadelphia. The article is an original one, and published with great care. The statistics given there strike me as remarkable, and it may appear to you in the same way. The writer collected statistics of one thousand healthy parents who gave information regarding their descendants, and twenty-five per cent. of their descendants were affected with tuberculosis. He then got data regarding one thousand tubercular patients, and only thirty-four per cent. of the parents had tuberculosis, being a difference of only nine per cent., and he explained this difference as due to contagion, which almost proves conclusively that heredity plays but a small part, and that this difference is due entirely to contagion.

DR. HOWE, Cañon City, Col.: It is true, as stated in some papers, that California has agitated the question of excluding consumptives from its borders. I have never heard that in Colorado anything has been done or seriously talked of. It is true that they have passed, in Denver, anti-spitting laws, and it is possible, in Colorado Springs, but it has not reached that point, as was stated in a meeting a year ago in Buffalo, that the streets of Denver were slimy with tuberculous sputa. Colorado has a climate which is favorable for tubercular pa-

tients, and it will be a great many years before their number will be a menace to the health of the people living there. It is furthermore strange that a people, nearly one-half of whom have gone there for tuberculosis themselves, should say that no other cases should come.

As to expectoration in the streets, it is a question with me whether the disease has been propagated to any extent from the bacilli in that way. Of the number of people in Colorado, quite one-half have come because of tuberculosis in their own lungs or those of some member of their families. There are no cases in my section of the country which have originated in that immediate vicinity. I believe Dr. Solly, of Colorado, has collected fifteen cases that have originated in twenty years in his town of twenty thousand people. Attendants, nurses, and physicians in sanataria, especially in this country, are very rarely infected. It may be that in such places these matters are better taken care of, and it is possible that in Colorado the amount of sunshine, the constant movement of the air, the increased electrical tension, and other favorable conditions have a modifying or destructive effect on the virulence of the bacilli before it has a chance to affect the people.

Health Boards, at the present time, can do the most good by educating the people, impressing upon them the danger in not destroying tubercular sputa, their duties to the healthy not only in their own families, but to the public at large, and by the invention of unobtrusive sanitary spit-cups and teaching the best manner of disposing of the sputa.

Soon the passage of anti-spitting laws will be general, and as the people realize their importance, their enforcement will be more easy.

A. R. WRIGHT, M.D., Buffalo, N. Y.: I do not believe that the communicability of phthisis pulmonalis has yet been proven. The rare cases that would seem to indicate it are only coincidences. To those who deny the heredity of the disease, I would say that you must surely admit that some persons have a greater tendency to phthisis than others, and that this tendency appears in certain families more than in others. I prefer to call this tendency a vulnerability which may be inherited. But many of the subjects of this inheritance, when properly cared for, and under the most favorable environment, may acquire sufficient vital force to overcome the ever-present tubercle bacilli. Put the same subject in the foul, half-starved life of the tenement-house, and he will soon lose the force to fight the micro-organisms, and succumb to their ravages. Not all the children of tenement-houses have consumption, because they have not inherited the vulnerability to the disease.

CHARLES E. SAWYER, M.D., Marion, O.: I believe tuberculosis to be infectious. I also believe that the predisposition of inheritance makes tuberculosis more than ordinarily communicable. It has been my observation that tuberculosis is much more likely to infect individuals of the same family, especially where they are allowed to nurse

each other. I have had many histories similar to that just recited by Dr. Kinyon.

I do not think it is possible for us, with our present limited understanding of the true nature of tuberculosis, to at present fix laws governing consumptives, but I do think it our duty as physicians to teach our clients that they are dealing with a dangerous condition, one threatening everyone in any way associated, but especially those who by nature and relationship are more than ordinarily predisposed. We should aid in the establishment of rigid rules of quarantine so far as other members of the family are concerned. This, I am sure, would do much toward preventing the spread of this terrible malady. In a family where any tubercular manifestations are present, everyone should be warned as to the necessary precautions. If this is done, much harm can be prevented.

My rule in all cases is to place the patient under the most favorable environments, separated as nearly as possible from the other members of the family, taking every possible precaution in the disposition of sputum and the care of the bedding and clothing used by the individual. I think it is always well to surcharge the atmosphere in which the patient lives with the fumes of some germicide. A very favorable prescription for this purpose I have found in the following formula:

℞. Spirits turpentine,
Eucalyptus,
Carbolic acid..... āā qs. ℥ iv.

Of this preparation put one ounce in one quart of water, in a wide-mouthed vessel, over a slow fire; a gas or alcohol lamp answers the purpose admirably. The steam generated is pleasant and agreeable, and at the same time very efficacious in the treatment as well as in the protection of other individuals coming in contact with the patient. With a few suggestions and with the adoption of a thorough regimen regarding the intimacy of association of individuals, much good can be done. It is our duty, as progressive physicians, to instruct our patrons as to the emergencies and demands in the handling of consumptives. This will serve as an entering wedge for more thorough laws and regulations, and ultimately we will be in position to adopt plans of a general nature which will meet all requirements.

A. P. Hanchett, M.D., Council Bluffs, Ia.: The closing sentence of the last speaker gives my position exactly with reference to this matter. I feel we should agitate this question. We should consider it from every possible position and learn more of our ability to limit the ravages of this dread disease. In many sections of this country more than thirty per cent. of the deaths result from tuberculosis in some form.

I think, also, there has been a confusion of terms in discussing

this question. I should say that consumption is in no way contagious, using the word strictly and technically. It is rather infectious. There is a vast difference. Contagion is communicated through the atmosphere. Small-pox is contagious. Typhoid fever is infectious, entering the system through the alimentary canal by means of infected food or drink. That is the position that is taken to-day by the scientific world in regard to a large class of diseases dependent upon some specific germ. They are communicated by the means of some medium conveying the specific germ to the individual contracting the new disorder.

The Powers and Limitations of Boards of Health in Relation to Measles, Scarlatina, Diphtheria, Typhoid Fever and Small-Pox.

By Chester G. Higbee, M.D., St. Paul, Minn.

The esteemed chairman of this bureau has outlined a herculean task for his colleagues in attempting to settle the "Powers and Limitations of Boards of Health." The executive officer of such boards is too often a conceited ward politician, who has obtained his position by political work for the appointing power, or in ward caucases for a nomination and election. Such officers, with exalted ideas of their official positions and their contempt for the people whose servants they should be, are likely to have very much such a time executing the laws as the historic monkey and parrot had in settling their difficulties. Sanitary inspectors are often ignorant foreigners, with no more knowledge or judgment in individual cases than a dog would have of health foods.

Our experience and observation leads us to the conclusion that the conduct and quarantine of these diseases should be left largely in the hands of the attending physician. He should be given the power to enforce his instructions, and should be held responsible to the public. Any intelligent and conscientious physician should be a better judge of these cases than any inspector can be. We know that apparently mild cases are quite contagious, and cases pronounced contagious by the bacteriological test have proven not to be contagious at all. Someone has said that "Bacteriology is the alphabet of Sanitary Science." If this were true, the science would have a very uncertain foundation to rest upon. We have known cases presenting all the symptoms of severe diphtheria, where the mother had frequent contact with the patient and with other children in the family, and no other member of the family contracted the disease. On the other hand, we knew a beautiful and talented young lady, the daughter of a physician, who said to her father, one evening, she was afraid she had diphtheria. There had been two deaths in her brother's family from this disease, and she had been exposed. In four days the girl was dead. Her father told us there were no signs of diphtheria about her. Cultures gave no proof, and no one contracted the disease from her. What is the use, in such cases, in placing the whole family in quarantine for four weeks? The attending physician should order that no outsiders should come into the house, and that the outer clothing, worn when in the sick-room, should be changed before going into public places. Does any physician take even this precaution in going

from one patient to another? Did you ever know of a physician spreading the contagion?

It is an unsettled question where public rights end and personal or family rights begin. The law has no right to interfere with personal liberty unless it is positively demonstrated that it is necessary to protect the public.

These diseases are prevalent among all classes of people. The poor family in the cabin or the wealthy in the mansion are equally liable to contract them. We used to speak and write of so-called dirt diseases. Clean dirt does not cause disease. If it did, no child would live to be ten years old. Steam or hot-air heated houses of the wealthy and want of proper exercise have caused more deaths than the open cracks of the cabin and enforced labor of the poor.

We believe experience proves that these diseases are no more prevalent among the crowded cabins on the flats than among the better houses in other parts of a city. Quarantine that deprives a poor man of the right to earn a living for his family, unless it is actually necessary to protect the public, becomes oppressive, and exercised, as it often is, in an arbitrary manner, it becomes tyrannical. Quarantine that would oppress a poor family might make very little difference to the well-to-do. As there are a much larger number of poor people than rich, if there is to be any relaxation of rigid rules it should be in favor of the poor.

If a strict quarantine is enforced for the public welfare, a compensation, fixed by law, should be paid to all rich and poor if they desire it. If property is destroyed, the public should pay for it.

These afflictions are not criminal; they are misfortunes, and we should help each other to bear them. A person in perfect health of mind and body is immune to all of these diseases, with the possible exception of variola, and to a large extent from that. It is necessary to have two factors to cause disease. The germ of any disease must have a receptive field, or it will not germinate. The best quarantine is good health.

Boards of Health are necessary. They should be governed by general laws and ruled by common sense. They should be to the people, teachers. The poor should be taught the most healthful and economical preparation of their frugal meals. The rich should be told that their richly prepared meals of stimulating food and drink tend to gormandizing and overworking of the nervous vitality in digesting them, and thus their ability to resist disease is impaired.

There should be perfect reciprocity between Boards of Health. The Golden Rule should apply to public as well as to personal conduct. The trouble is, we read it as the child did, "Do unto others as they do to you." Every physician should be an expert in sanitary science and hygiene. He should preach and practise it, not only among his own patients, but in public and in private at all proper times. Our people should be taught the necessity of sanitation and quarantine for the good of the public. They should learn that it is desirable for

their own health and comfort. When this system of education becomes general, we will have but little need of Boards of Health or of quarantine for the common diseases. From personal inquiry in large cities, we are satisfied that it is the custom of many physicians of large practice not to report contagious diseases unless they think the patient is going to die, while the young physician will very likely report every case of eruption of the skin as a contagious disease, and every case of sore throat as diphtheria. We believe the examination of the records in every health office will confirm this observation. If each physician was made responsible for the protection of the public, in all doubtful cases council would be called and diagnosis established. There is such a vast difference in the contagion or infection of these diseases that we wish to briefly state our position, even at the risk of encroaching upon the province of another writer. Measles is propagated through atmospheric conditions, and is a mild disease. Quarantine is unnecessary and useless. Scarlatina, although not as easily contracted as measles, is a more dangerous disease, and the patient should be isolated and a thorough disinfection of everybody and everything that could carry the particles of desquamation should be made. House quarantine is unnecessary if the foregoing precautions are taken.

Diphtheria is not contagious from the atmosphere unless the discharges have been allowed to dry and become pulverized, so as to float in the air. Everything having any of the discharge upon it should be immediately disinfected or burned. No one ever contracted diphtheria from the odor arising from the disease. If these precautions are taken, house quarantine is unnecessary. Typhoid fever is not contagious in the ordinary sense in which we use the word. No one contracts the disease from even frequent contact with the patient, if they breathe fresh air in the intervals. Quarantine in any form is useless. Sanitation is everything. The above conclusions we have verified in hundreds of cases where there was no Board of Health to interfere. We wish to enter a protest against the practice of Boards of Health requiring membranous croup to be reported and quarantined. It is not contagious. We never knew one person to contract it from another, and we never isolated a patient who had it.

Small-pox is always contracted, either directly or indirectly, from someone who has it. It is a foul and dangerous disease. Strict quarantine, both personal and house, is necessary. The only prophylactic worth considering for a moment is vaccination, with pure, fresh bovine virus. If this is done properly, with clean instruments, there is no danger of any serious results, and it is a sure protection.

We are aware that the foregoing recommendations are at variance with the preconceived notions of many physicians; but they are the result of large experience and thoughtful study of these diseases.

Let us repeat: the only perfect prophylactic or quarantine is good health. For this condition physicians should work, and in a large measure be held responsible. If any medical law is justifiable, it would be one to aid in bringing about such a result.

The Danger Period of Contagiousness in the Various Contagious Diseases.

By Harvey B. Dale, M.D., Oshkosh, Wis.

That the direct etiological factor in tuberculosis is Koch's bacillus is now quite generally conceded. This fact being admitted, the question as to when this disease is likely to be communicated resolves itself into a study of the habitat of this particular microbe, the circumstances under which it is likely to sally forth in search of more human worlds to conquer, and the conditions which will favor its growth and development in its new quarters. There are, indeed, few tissues of the body in which this micro-organism may not, at one time or another, find a comfortable abiding-place. In many of the tissues, however, little risk is afforded to any but the patient himself. The bacillus at work in the meninges of the brain, for instance, threatens no one but the owner of the tissues in question. But when the same microbe establishes head-quarters in the lungs and adjacent structures, it thereupon becomes a direct menace to all who come in contact with the patient.

Does danger lurk in the expired air from the consumptive patient? This is vigorously disputed. Osler claims that it has been fully proven that this expired air is not infectious. Goodno, on the other hand, states that carefully conducted experiments of his own have demonstrated the presence of the tubercle bacillus in the air in question. We are probably justified in considering this matter still *sub judice*, contenting ourselves with the reasonable reservation that physicians and health boards must give to the well the benefit of the doubt, and be governed accordingly.

It is generally conceded that the chief danger in tuberculosis lies in the sputum. Herein are found the germs that kill, and through desiccation and pulverization of this expectorated matter the dissemination of these germs may become practically limitless. It is superfluous to detail the numerous facts, no doubt familiar to all of you, which go to prove this. Suffice it to say that a knowledge of them renders it perfectly evident that the tuberculous patient becomes a menace to others from the very hour when he commences to cough—provided, of course, that rigid precautions are not taken to promptly render the sputa innocuous—and that this danger period unquestionably extends to the moment of death, or of cessation of expectoration through recovery. Broadly speaking, then, the period of contagiousness in pulmonary tuberculosis may be briefly characterized as first, last, and all the time.

If we accept the causative relation of the Klebs-Löffler bacillus to diphtheria—and this is now generally admitted—the period of danger in this disease becomes perfectly evident. It is confined to that time when the patient has these bacilli in the throat or upper air-passages. The length of this time, again, is very uncertain. Bacilli are sometimes found in a throat that is apparently perfectly healthy. They quite often appear in cases presenting only the indications of ordinary catarrhal pharyngitis. It is evident from this that the length of time, prior to the development of obvious diphtheritic symptoms, during which the disease may be given, cannot be predicated with any certainty.

It is claimed that the diphtheria bacillus is given off but slightly in the patient's breath. The main element of danger lies in the pharyngeal discharges. These may be carried upon clothing and other things in many obvious ways. The bacillus of this disease possesses, too, an astonishing hold upon life, and under certain circumstances may prove a menace for weeks or even months. It is sometimes found in the throat of a patient long after apparent recovery. It is obvious, on this account, that, even for weeks after he considers himself well, the patient may be affording a constant risk to any who come in contact with him. Apparently the only method of drawing the danger line in this disease lies in frequent microscopical examinations of the mucus from the air-passages of a patient on the road to recovery.

While all signs point to the microbic origin of scarlet fever, it is by no means certain that the particular causative microbe has yet been isolated. Until we are sure of the identity of this micro-organism, we can only fall back upon clinical evidence and statistics, derived therefrom, in estimating the danger period in this disease. When it comes to this, authorities are generally agreed that the time of greatest contagiousness is during desquamation. Clinical experience seems to bear this out, and it is also readily explained by the facility with which the fine, bran-like scales are borne through the atmosphere. Desquamation does not present the only danger, however, and it is confidently asserted that the patient is a possible source of infection from the moment when the initial sore throat appears until the last scales have dropped from between the fingers and toes.

It is believed that the germ may exist in fæces and urine even later than this, and there is also evidence that an otorrhœa, following this disease, may infect others at any time during its existence. Whether the scarlet-fever poison may be transmitted any distance through the air is an interesting question. It is usually answered in the negative, but Hatfield reports an instance in which the evidence seems to show beyond a peradventure that the germs were carried upon a strong wind over a mile, thus transplanting the disease into a family which had no other discoverable means of connection or communication with the infecting source.

The exciting cause of small-pox is yet a matter of uncertainty. Hyde advances the theory that the human body in health is continu-

ally enveloped in a volatile medium given off from the various glands of the skin, and that very likely in the case of variola this medium is saturated with the poison of the disease and thus becomes a source of infection. This will explain the fact, quite generally conceded, that small-pox is contagious at any period of its existence, even during the stage of so-called incubation.

Most authorities agree that this disease reaches its acme of contagiousness at the time when suppuration is about to commence. Just why this is so seems to be uncertain. Many observers believe that it is due to the presence in the pock of a micro-organism, which bears a direct etiological relation to the disease, and which at this time attains its ideal development. However, the standing of this particular microbe as a disease factor has not been fully established as yet. We must content ourselves with the bare clinical fact, apparently established by abundant evidence, that the time in question does offer the greatest risk of infection.

Time was when typhoid fever was considered quite contagious. The best evidence of the opinion of the profession of to-day, however, is found in the fact, that cases of this disease are admitted to hospitals without hesitation. These patients are placed in the same wards with others, without fear of spreading the disease, and all experience goes to show that such action is justifiable. Sicard caused typhoid-fever patients to breathe into curved tubes filled with sterilized water, and in this water afterward found the bacilli supposed to cause this disease. The possibility of contagion by means of the breath is thus apparently demonstrated, but practical experience proves this danger to be trifling.

The typhoid bacillus may be found in nearly any of the tissues of a person suffering with the disease. This would indicate possible infection from any one of many sources. This possibility cannot yet be dignified to a probability, however, as investigation shows infection to arise in nearly all cases from the patient's stools. The mischief going on in Peyer's patches seems to be mainly responsible for the transmission of the disease to others.

The time during which the alvine discharges are most noxious is uncertain. Common sense would suggest that it would be when intestinal inflammation and ulceration were at their height. There seems to be no evidence, however, that contagion is not fully as rampant up to the moment when the ulcers have entirely healed. That the arrival of this important period may be reasonably estimated by the character of the stool is evident; but it would seem to be more within the confines of common sense and public safety to depend upon the microscope in settling this important question.

Presumably, yellow fever has a microbe of its own. Analogy points strongly in that direction, but up to the present time indefatigable research along that line has not borne definite fruit. Sternberg inclines to the belief that the chief habitat of this organism, whatever it may be, is the fæces, and that it is susceptible of rapid cultivation

outside the body, under favorable atmospheric conditions, in either fecal or other animal organic matter.

Whether or not the specific organism originates outside the human body is a mooted question. That it is capable of reproduction and multiplication in the human system is unquestionable. Regardless of the part played by the atmosphere and various outside agencies in producing yellow fever, we have, then, given a patient suffering from this disease, an agent undoubtedly capable of communicating it to others. Yet it is claimed that direct transmission from person to person is not common. It seems evident, from the facts at hand, that the poison must undergo some change, after leaving the patient, before it acquires the power of infecting others. The particulars of this metamorphosis are at present unknown. Nor is there any evidence at hand to show that such giving off of poison and resultant changes therein are peculiar to any one period of the disease. This is another one of those matters that are still *sub judice*, and which can only be dealt with in a practical way by giving to the well the benefit of the doubt.

The exciting cause of Asiatic cholera may now be considered as reasonably well settled. Koch's comma bacillus and this disease have been linked together by a bond that time will probably prove indestructible. The habits of this microbe are now well known. Its fondness for the small intestines and its presence in the discharges therefrom are generally understood. And that this disease is not transmitted by the atmosphere, but only through infected dejecta which, in one way and another—chiefly through impure drinking-water—find their way into the alimentary canal, appears to be quite firmly established.

These facts being conceded, the task of locating the danger period in cholera resolves itself into one of ascertaining when the patient's stools are most likely to contain the causative microbes. Practical investigation is said to show that these germs are most numerous in the early part of the disease. Goodno asserts that they frequently disappear by the fourth or fifth day, and are rarely found after the eighth or tenth. This would indicate that the earlier stages of cholera offer most opportunities for infection. Practically, however, the early days may often mean the whole duration of the disease, for in fatal cases death frequently occurs within a period that can only be measured by hours. To summarize, rapidly fatal cases are probably dangerous throughout their entire course, while slowly progressing ones and those that recover afford but little prospect of infection during their later days.

Measles and whooping-cough are two of the so-called diseases of childhood whose specific causative germs are still at large. In some respects these diseases are allied, and they frequently prevail in a community at the same time. Whooping-cough, however, is usually looked upon as but slightly contagious, measles as extremely so. There are some observers who dispute this, and who believe that pertussis is not

only susceptible of communication directly, but is also carried upon fomites and often passed from one to another by a third party.

The contagious period in whooping-cough seems to be limited only by the extent of the disease. The causative factor is present and transmissible even in the catarrhal stage, before the real nature of the malady is ascertainable. It is apparently more active during the paroxysmal period, and perhaps less dangerous as the cough subsides.

The virulence of the specific poison of measles is generally recognized. Those exposed in any way seldom escape it, and it is believed that the chief reason why measles is a disease of childhood is because few reach maturer years without having encountered the causative germ and fallen a victim to it. It is generally admitted, also, that the germ of measles is present and active from first to last. Most authorities do not distinguish any period of special virulence, but Starr claims that infection is most active during the pre-eruptive catarrhal stage.

The poison of measles is generally thought to be easily and promptly destroyed upon exposure to open air, and consequently not long-lived. A case in the writer's experience, however, goes to show that this is not always true. Not many months since I was called to see a well-developed case of measles in a nursing infant five weeks old. The child had not been taken out of the house, and no one had been in the room with it who had the measles or had been anywhere in the neighborhood of a case. Further investigation, however, disclosed the fact that the nurse-girl had had measles some three months before. After recovering from the disease, all of her clothing had been thoroughly aired, but, notwithstanding that fact, some of the live and active germs must have remained concealed therein.

This sketch of the danger periods in the various contagious diseases has of necessity been brief and incomplete. An elaborate discourse upon any one of the maladies in question would consume time far beyond that allotted to this paper. It is to be feared that after listening to these straggling statements, weak in actual facts, but perhaps pregnant with suggestion, the members of this honorable body will be in the state of mind of that student who eagerly takes down his favorite work upon practice in the hope of finding light upon the treatment of an intractable case, and who reads under the head of therapeutics the consoling advice: "For further remedies, consult the Materia Medica."

The bald fact is that our knowledge of the contagious diseases, so far as their periods of danger to others are concerned, is in a most unsatisfactory condition. It is now in what might called a transition stage. Not many years ago, when microbes were unknown, all sorts and sizes of theories were advanced in discussing the etiology of these particular maladies. The heavens above, the earth beneath, and the waters under the earth were searched in the vain hope of discovering the something believed to be the source of evil. It is probable that some of the causes learnedly advanced had no more to do with the diseases in question than they had with the transit of Venus.

Now all is changed. The evolution of bacteriology has worked miracles, and is slowly but surely bringing order out of chaos. The microbic agents that are responsible for the existence and propagation of tuberculosis, diphtheria, typhoid fever, and Asiatic cholera are already known and are being intelligently and thoroughly studied. All reasoning based upon analogy goes to show that the other members of the contagious disease group have similar causes, and that in time these causes will also be within our grasp.

With this revolution in the manner of studying disease and its causation has also come a general overturning of many long-cherished ideas concerning the period of contagiousness. This upsetting of pet theories is in active operation at the present time. It is bound to continue until thorough investigation has accomplished its work and brought us and our ideas to a sound basis. When the physician of to-morrow wants to know when and why a certain disease is contagious, he will interrogate his microscope. He will bear in mind that when the direct causative factor, in the shape of a microbe or its ptomaine, is in evidence, then is there risk of contagion, and he will govern himself accordingly. The future labors of health boards, too, will doubtless be along these lines. Every case of contagious disease will be, as is growing to be the custom to-day in diphtheria, a case for individual microscopic investigation. When that day comes, the public management of these diseases can and will be conducted with scientific precision. Until then we can only proceed along the old lines, always giving to the well, as stated before, the benefit of any doubt.

Discussion.

J. P. Rand, M.D., Worcester, Mass.: I am glad that the doctor has taken such advanced ground in recognizing germs as the etiological factor of contagious disease. The very fact of a period of incubation proves that the original infection must not only be present but alive and able to multiply, in order to produce its characteristic effects. If the element of contagion was not a living entity, there would be no such thing as a period of incubation. The introduction of pathogenic material into the system would be followed by immediate results, like the bite of a rattlesnake or the sting of an insect. Measles would then develop in a few minutes after exposure, and every other contagious disease in the same way.

But we know this is not so; every contagious disease has a distinct period of incubation which corresponds closely to the rapidity with which its germ develops in the laboratory. The diphtheria bacillus will grow in a few hours, while that of tuberculosis requires days and weeks.

Now, what has all this to do with the "danger period of contagion"? Just this: If disease is *produced* by a living organism, it is also *reproduced* by the same organism in a similar way, and its period

of contagion or reproduction must correspond exactly to the time of its separation from the parent tissues or of its being given off.

The teachings of bacteriology have made the authorities of the past of "none effect." It is only a few years since the most acute diagnosticians declared that membranous croup was not diphtheria and not contagious. To-day we know it is both. Was this found out at the bedside? Not at all. The culture tube and microscope revealed it. The character of any contagion being once demonstrated, its prophylaxis follows as a matter of course. The danger period now is not to be measured by a clinical history, but by the living presence of a specific germ.

Here, then, is the whole meat in a nutshell. Clinicians may differ and patients may differ, but the microscope in each case will decide.

From the foregoing it can be readily seen there is no such thing as knowing how long a disease is contagious until you have first found out what its *materies morbi* is. At the present time the etiology of at least three diseases of childhood must be put on the doubtful list, viz., mumps, measles, and scarlet fever, none of which has as yet a recognized bacillus. Small-pox, too, comes in the same category, and possibly yellow fever and whooping-cough, though Dr. Sanarelli, over a year ago, claimed to have discovered the bacillus of the former, and Dr. Henry Koplik, of the Johns Hopkins Hospital, only a few weeks since, the latter.

The etiology of only four diseases mentioned by Dr. Dale can be fairly claimed as demonstrated, and consequently we have but four diseases whose period of contagion can be intelligently studied; these are diphtheria, Asiatic cholera, tuberculosis, and typhoid fever. Recent investigations by Dr. Mark Richardson in the Massachusetts General Hospital have shown typhoid bacilli to be present in the urine of about twenty-five per cent. of all cases of this disease, and in five cases, out of seven which came under his observation, these bacilli were present at the time of the patient's discharge from the hospital. Tubercle bacilli, too, may be occasionally demonstrated in the urine of tuberculous patients. I have myself recently found bacilli in the urine of a patient who was subject to occasional attacks of hematuria. The finding of pathogenic germs in the urine opens up a new field for scientific investigation, and their presence must always indicate danger.

The action of heat, cold, sunlight, and various antiseptics upon germs in general does not properly come within the scope of Dr. Dale's paper, and hence must be passed without remark.

In closing, let me briefly emphasize two thoughts: First, The clinical history of any disease, however valuable, is not a guide to its etiology or mode of propagation. Second, since every contagious disease is due to a specific living organism, its period of communicability can only be measured by the presence or absence of the parasite itself.

CHARLES GATCHELL, M.D., Chicago, Ill.: I think it has been well established that pseudo-membranous croup and diphtheria are not

identical. The preponderance of evidence is very much in favor of this view. For my part, I am convinced that they are two separate and distinct diseases.

In reference to Dr. Dale's very able paper, I see nothing in it to criticise. It takes a very advanced position with reference to the microbic origin of this disease, and one I am glad to see brought before a homœopathic meeting in so pronounced a manner. If our school has been lacking in anything, it is in being too conservative in accepting new truths based upon experiment and demonstration, as these are. Dr. Dale refers to the microbe of yellow fever not having been demonstrated satisfactorily as yet. I think that he might well have included the recent investigations of Professor Klebs, of Chicago. Last January, when I was taking a course in his laboratory, he was engaged upon an experiment which seemed to have definite results. He had had sent him from the yellow-fever district organs of persons who died from the disease. He discovered a new organism, which in appearance is like a strawberry, and one which differs from Sanarelli's organism. The new organisms he found only in the mucous membrane of the stomach, in the tissue of the liver, and in the pancreas. In those three organs they were found in the specimens from both cases, and under conditions which led him to believe they were the specific organisms of yellow fever.

Dr. Hooker: Would you not isolate your patients with membranous croup? And how will you designate between membranous croup and diphtheritic croup?

Dr. Gatchell: In reply to Dr. Hooker's questions, I would say that I do not isolate cases of pseudo-membranous croup. I have always been able to differentiate my cases of pure croup from my cases of diphtheria by the clinical symptoms. Should I ever be in doubt, I should resort to bacteriological examination, but up to the present time I have never been compelled to do so.

H. C. Allen, M.D., Chicago, Ill.: I must take issue with some of the points in both papers—the original paper and the discussion—in regard to whether the bacilli or germ is the cause of disease. And for one I am thankful that the homœopathic profession has gone a little slow, and has been a little conservative in accepting these advanced theories on the propagation of contagious diseases, for do they not change with the changing seasons? It is the germ theory this year; what will it be in 1900? Let us "stick to our text." We have done better than the other school in curing the sick, and that is what we are working for.

F. J. Boutin, M.D., Independence, Mo.: I think if I were called in a case that appeared to be membranous croup, and the patient had had diphtheria one, two, or three weeks before, I should be afraid that it was diphtheritic croup, although I could not see any indications of diphtheria whatever. But I have seen so many cases when

there was not a case of diphtheria in the country anywhere, and there was no indication whatever of diphtheria, nor that the patient had taken it from any other person. Those I called membranous croup. I cannot believe that membranous croup is contagious.

It would seem that the paper assumed that tuberculosis was contagious. I do not recollect a case (and I have had quite a number of tuberculous patients) wherein there was any indication whatever of any contagious character in the disease of tuberculosis.

Question: How do you discover whether it has arisen from contagion or not?

Dr. Boutin: I do not believe it arises from contagion. I have seen indications of vulnerability, that certain persons inherit a vulnerability to these diseases. They do not inherit the disease, but they do inherit the vulnerability to the disease; but I do not believe in any contagiousness of the disease.

WILLIAM M. DAVIDSON, M.D., Chicago, Ill.: In regard to the infectious character of consumption, there are two sides. One side states decidedly that it is contagious and another denies that.

Out in the cemetery, in the town where I was raised, there is a modest headstone on which there are seven names of children, and at the bottom of the headstone the names of the parents. The physician who was present when everyone of these seven children were born was present when they died, and was present when the parents died. If one were to look over the names he would see that the oldest one of the seven children lived fifteen months; the longest period between any two births was fifteen months. The physician claimed they all died from tuberculosis. The parents died about six months apart, the mother about one year after the last child was born, the father about eighteen months. There was tuberculosis running right through the family. It seems that the infectious character of the disease is pretty well settled.

How would we quarantine the subjects? There is considerable trouble in this. Can you pass a law whereby you can take an individual out of his own house? That question came up in Chicago. My neighbor refused point blank to permit his boy to be taken out of his house. The boy consented to go on account of the family.

Now as to the contagious character of diphtheria. I do not think there is any question about that. We know scarlet fever will spring up spontaneously. We do not know whether it is due to this form of bacillis or to that.

As to the vulnerability of the individual, I think that could refer only perhaps to small-pox. I would not vaccinate my own child, and would not put poison in the blood of a healthy child.

T. C. DUNCAN, M.D., Chicago, Ill.: With reference to the danger-point of contagiousness in small-pox, it is, as I understand the writer of the paper to say, as soon as the case is diagnosed; then infection

is possible. I have had some experience with persons exposed before pustulation took place, and there was no contagion—they did not have the disease. They were vaccinated, however.

In my paper I tried not to be biassed one way or the other, but presented the facts as claimed on each side. It is a serious matter for a large medical body like this to be committed one way or the other on a question where there is a division.

Admitting that the cause of tuberculosis is the bacilli, we have heard in some sections that it is not infectious, and in other places it undoubtedly is infectious. For that reason they recommend a change of climate; and it is my individual opinion that it is infectious under certain conditions. I believe we should say "modified infection," and great care should be exercised to circumscribe the cases. But how much power should we delegate to a Board of Health, to take charge of our families? That is quite another question. There are points in diagnosis and in treatment, and in the ravages of the disease and in the condition of the surroundings, that are not settled. In this disease there are many points, especially about the hereditary part of it, that seem unsettled, and I think the position that physicians should take should be that of warning. As Dr. Higbee states in his paper, the physician should exercise the power that would otherwise be delegated to the Board of Health.

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Sectional Address.

By John Kent Sanders, A.M., M.D., Cleveland, O.

Surgery and surgical art, for the year ending with this session of the Institute, have kept pace with the forward movement of every other department of the healing profession. Asepsis has more and more vindicated the justness of its claim, as the angel of safety and hope in all surgical exigencies, whether in operations or in the surgical ministries which follow them.

What advances have been made in the general principles of surgery? what new thoughts have been suggested in its art or technique? what new experiences at the operating-table or new observations at the bedside have furnished? what broadening of the surgical therapia has been attained? These will lie somewhat within the scope of the paper I have the honor herewith to submit to you, but they will be more largely unfolded in the suggestions of the papers of the bureau which will follow. Sure I am that the papers and discussions of this bureau, as well as the papers and discussions of the other bureaus of the session of the Institute, will abundantly satisfy not the profession alone, but the thinking people of the laity, that the time is fully ripe for a full recognition on the part of the general government of the claims of Homœopathy for an equal distribution of appointments to the medical and surgical staff of the army and navy.

This proposition is pertinent to the present time, when our nation is engaged in war both on land and sea, and minor conflicts are of daily occurrence, and great sieges and battles are imminent.

Perhaps few events in the surgical year have roused as much discussion as the report, just a year ago, by Mikulicz of Breslau, of three months' experience in the use of gloves during operations. He again, in April, at the Berlin Surgical Congress, adds another nine months of the work with gloves, with a very flattering improvement in his statistics. The use of gloves has been adopted in a great many of the Continental clinics, and with almost universal improvement in freedom from suppuration, especially in connection with stitches. That it does not take the place of the most scrupulous cleanliness and disinfection of the hands is universally conceded. After careful synopsis of the discussions on this subject before the principal surgical societies, one is forced to the conclusion that there is something more than an absurdity in the use of gloves, as is claimed by the most vehement opponents.

Simple cotton gloves sterilized by heat are advocated by some, and

also a number are using now, gloves made of rubber, or made of silk and cotton, and rendered impervious by some preparation. Where made of silk and cotton, a ten per cent. solution of paraffine in xylol or xylene is used. One or two German surgeons are enthusiastic about thin buckskin gloves that have been soaked in xylol. Rubber gloves, or cotton, or silk gloves are sterilized by heat or boiling in carbonate of soda solution, one per cent.

The most reasonable argument against the use of gloves seems to be that they affect the sense of touch; of course, this would vary to a great extent with the operator, and undoubtedly is so great a disadvantage with some as that the good resulting from their use would be overbalanced by the loss of a delicate touch.

The use of rubber gloves is especially advantageous in hemorrhagic emergency cases, where time cannot be given for the thorough disinfection of the hands; it being possible to sterilize the outside of the rubber gloves very much more quickly than to sterilize the hands, of course such a procedure would only be justified in the most extreme cases of emergency, as a rubber glove is liable to be pricked by a needle or otherwise subject to a tear.

That the use of gloves has acquired a prominent recognition among operators is certainly shown by their adoption as part of the outfit for all army surgeons. Their fitting adaptation to the use of surgeons in the army is particularly evident from the fact that often, for weeks at a time, the army surgeon is called upon for other work than that strictly pertaining to surgery. His hands become more rough than usual, and are sterilized with greater difficulty. Then, again, the circumstances of war are such as to make it a necessity for him to operate often for hours at a time, when a repeated scrubbing and continued disinfection of the hands by antiseptics would render the sense of touch almost *nil*. To summarize, however, the use of gloves during operations will be settled by each individual operator. Theoretically it is undoubtedly a step forward in perfect asepsis, but there, as in a great many other methods, individual idiosyncracies seem to decide for or against their adoption. For example, the Kelly method of sterilization of the hands—that is, soaking the hands in a saturated solution of permanganate of potassium, then bleaching in a saturated solution of oxalic acid, and then rinsing in a saturated solution of bicarbonate of soda—cannot be universally adopted, is the experience of the writer. The criticism on that method is that it so roughens and chaps the hands that, whereas it may answer for the first sterilization, the hands are so stiffened and roughened that the next two or three attempts are without effect.

Besides, one or two surgeons, known to the writer, cannot use a solution of bichloride for the hands.

Mikulicz also gave a report in regard to experiments, showing the advantage of using a fine gauze mask over the nose and mouth by the operator and his assistants. His bacteriological experiments in this line being especially exhaustive and showing the easy contamination

by a talking or slight coughing within a reasonable distance of operation wounds.

Perhaps the most brilliant successful operation that has been recorded in the past year was that by Karl Schlatter, in the Surgical Clinic of the University of Zürich, on September 6, 1897, who operated on a patient fifty-six years old, who was suffering from carcinoma of the stomach. He removed the entire stomach, and then stitched the œsophagus to an opening made in the small intestine and about fifteen inches from the pylorus. The longitudinal slit was made into the intestine and the mucous membrane of the œsophagus was united with the intestinal mucous membrane by a continuous circular suture. Above this a second suture, extending through the muscular and serous coats, and above all, a Lembert. The patient made a most remarkable recovery, going into a speedy convalescence, and on the latest report, eight months after the operation, the patient was in excellent health.

From careful investigation in this case of the metabolism following the resection of the stomach, covering a period of five months, the following conclusions seem justified by Dr. Schlatter, viz.:

1st. The human stomach is not a vital organ.

2d. Fluids and solids constituting an ordinary diet are capable of complete digestion and assimilation without the aid of the human stomach.

3d. Typical vomiting may occur without a stomach.

4th. The chemical functions of the human stomach may be completely and satisfactorily performed by the alimentary canal below.

The same operation has been attempted several times since, in this country, but without other results than simply the completion of the operation and the speedy death of the patient. Brigham, of San Francisco, however, reports a total extirpation of the stomach in a patient sixty-six years of age, suffering from carcinoma of the pylorus, with an involvement of the entire exterior wall of the stomach. At the time of the report, four months after the operation, the woman was still improving in health.

The general discussion aroused by the report of Schlatter's case before the Berlin meeting of the German Society of Surgery, and also the general discussion at the Denver meeting of the American Medical Association two weeks ago, tended to place the operation as a more feasible one, in many cases, than has heretofore been held.

One of the most interesting features of the Berlin meeting was the exhaustive report of Professor Frederick, of Leipsic, giving the results of a long series of experiments in relation of bacteria to fresh wounds; the general result being that the infection was superficial for six to eight hours. The conclusion drawn from the paper was that wounds could be freshened at the edges and stitched, if seen within eight hours; but, if older than that, they should be treated with drainage.

A method of treatment of Pott's disease of the spine which has been brought into considerable prominence during the past year, is forcible correction of the deformity of kyphosis—that is, rectifying

the angular deformity of the spine at one sitting. The study of the statistics offered as a result of this operation, in over a hundred cases, seems to demonstrate that this procedure, so entirely at variance with the time-honored treatment of Pott's disease, is justifiable in a limited number of cases, namely, those in which the number of vertebræ involved causes only a small kyphos; also, where an abscess of any size cannot be diagnosed. Where the lumbar vertebræ are involved, better results are to be expected than where the dorsal vertebræ are diseased, and better results where the dorsal are involved than where the cervical are involved.

One of the decided advances made in surgery during the past year is the publication of journals of surgery, the contributors and editors of which are homœopathic practitioners. The *Homœopathic Journal of Surgery and Gynecology*, published by the Medical Century Company, is the first in the field. The first number was so good that it drew forth favorable comment from a great many of our old-school brethren, to say nothing of the praises that it had from our own men.

In Berlin, Professor Von Bergmann has given an interesting résumé of the treatment of gunshot wounds of the cranium, in which he advocated, as he did five years ago, when the writer had the pleasure of hearing him in person, the absolute non-interference in penetrating gunshot wounds, whether there was or was not an opening of exit, except in extreme paralysis, showing, by a long list of statistics, that the results are very much better where the surgery was confined to rendering the wound aseptic. Such a stand taken by an operator who has originated and advocated so many radical operations should be more influential toward conservative surgery than if advocated by a more conservative man in other respects. His statistics absolutely prove, however, that non-interference in such cases gives the best results.

It has been proven by a number of tests in the past year that there is a therapeutic action in the Röntgen ray. To add to the statistics that have already been given relative to the matter, two cases have been under observation. Two cases of carcinoma of the breast that had reached the ulcerative stage, and had been proven carcinoma by microscopical examination, showed a rapid change for the better after three months' treatment with the ray. The sittings were of ten minutes' duration, three times a week, and applied through a dressing of gauze. In both these cases the healing up of the ulcer was very rapid, healthy granulation springing up, and the zone of cancerous deposit that was not already broken down rapidly atrophying. In both cases relief from pain was very marked. In one case there was only a small nodule left, which is gradually disappearing, six months since treatment was discontinued.

One of the most striking examples of the advance that surgery has made in the line of conservatism will doubtless be exemplified in the reports from the department of the Surgeon-General of the United States Army, in connection with the present war. We, as surgeons,

are interested somewhat in the theoretical part of modern warfare, in the question whether these modern bullets, in the long run, are as valuable for repulsing an enemy as the old-fashioned, larger calibred, and slower-going bullet. The modern bullet can go through a greater number of men in an advancing line, but the immediate disqualifying power seems to be less.

The men who have the bullets going completely through the body are able to keep on advancing and fighting for hours without recognizing a disability which would be almost immediate in the older bullet. The chances of ultimate death to the greatest number are perhaps increased by the modern rifles, but the immediate effect on an advancing column is lessened. That this is recognized as a general proposition by men who have already given the test, was brought out in a striking manner by Bruns, of Tübingen, at the last Berlin Congress. He showed the effects on cadavers of bullet-wounds where the point of the modern bullet had been filed off, called "dum-dum bullet," claiming that the English troops in the late Indian wars had filed them down on stones after they had found that they had a much more disastrous effect on the enemy. These effects were thoroughly illustrated by his many experiments, and he ended by appealing to his countrymen to use their influence at the next International Medical Congress to urge that such bullets should be forbidden by proper state regulations by each nation represented, so that, in case of a general European war, these added horrors should be saved. It is to be hoped that our boys in blue will not make use of the knowledge of such an expedient for conquering even a cruel and pitiless enemy. It may be a short lesson, although a bitter one, to teach us which is the better of the two evils. One of the pleasanter features, if it can be so called, is the fact that the rudimental elements in asepsis and antisepsis will now save many a brave fellow from death incident to gunshot wounds, whereas a thorough surgical knowledge was requisite to stanch blood and keep aseptic, wounds made of the larger calibre in years of the Civil War. It is undoubtedly true that the present rifle ball is theoretically much less likely to cause a septic wound than the bullets from arms in use a few years ago. The bullets are of such small calibre and the force and the velocity are so great that the chances of infecting a wound by carrying pieces of clothing or splinters of arms or armament is much less; therefore, the treatment of the wound on antiseptic principles without immediate probing or meddling with the wound itself, will be given much more frequent opportunity. Unfortunately, the tendency of the modern bullet seems to be to cause more shattering of long bones, and, where a viscus is penetrated, especially a viscus containing fluid, to make a wound that is much more dangerous. At first it was supposed that the bullet itself, on entering a fluid-containing viscus, exploded; but, from the use of the bullet in actual warfare and in experimentation, it is proved that the bullet sets in motion waves of vibration in the fluid which causes the rupture or the explosion of the viscus itself. That the requirements, however,

of skilful diagnosis as to perforation of viscera and splinterings of bone, later on in the hospital will be as much and more required, is undoubtedly true.

In the hospitals, also, and on ship-board, will be done many an operation which was never thought of as a possibility during the late civil war. Partial and total extirpation of injured viscera will be attempted often; so that many cases which in former years would have been given up as necessarily fatal, may now have an opportunity to live, from the skill of modern surgery. Resections of joints and of bone will take the place of many an amputation. The use of temporary bone clamps in compound fractures will have opportunity to prove itself a justifiable surgical procedure. Skiagraphy is more of a necessity as an aid to diagnosis with the modern bullet, and a portable apparatus is considered now a part of the army surgeon's equipment.

What surgery has accomplished during the current year as sketched in this brief summary of its salient points, is eminently creditable to the profession, and furnishes a gratifying augury for the year which lies before us. The war now fairly inaugurated will doubtless make the year distinguished not in victories of our army and navy alone, but in triumphs of modern sanitation and surgical and medical skill. The power of modern asepsis and antisepsis, both in sanitation and in surgery, will be mighty to save, where otherwise the death-rate would wellnigh be limitless. It is an occasion of deep gratitude that our heroic brave will have the benediction of all the amelioration and helpfulness known to modern medical and surgical science.

The Operative Treatment of Hernia in the Aged.

By George F. Shears, M.D., Chicago, Ill.

That a case of strangulated hernia demands operative treatment, no matter how old the patient, is a well-recognized surgical precept which is acted upon daily, and therefore need not be considered in this brief paper; but that the surgeon is warranted in advising a radical cure in a non-strangulated hernia in a patient who has passed the meridian of life, has not received so general acquiescence.

Probably Coley, in the statement found in his report in the "Annals of Surgery," vol. xxv., page 271, voices the sentiment of the profession when he says, in reference to the scope of the operation: "In regard to adults, operation may be advised in most cases of inguinal or femoral hernia up to the age of fifty."

Wyeth, in less definite terms in regard to the time limit, supports him in his article in the supplement of the "International Cyclopedia," in these words: "In aged persons operation should be avoided unless strangulation occurs."

It is difficult to fix an age when one has passed beyond the limit of active life and may be properly termed aged; but, for the sake of convenience in this presentation, I have selected the year beyond which Coley thinks operation for radical cure may not be advised—namely, fifty years.

The reasons generally advanced for this limitation of operative interference are, first, that if the patient has been enabled to live for many years (for we all recognize that hernia is usually present from early life) without strangulation, it is not liable to occur during the few remaining years of life, and it is not wise to risk the dangers of an operation for a condition which does not demand operative interference. Second, that operations after fifty years of age have a great mortality. Third, that at this age the tendency to degenerative tissue changes being greater than the tendency to reconstruction, a permanent cure is not liable to be effected.

For many years these opinions guided my actions and I did not advise the radical cure in patients over fifty years of age. I encouraged such patients to wear a truss, and many are the ingenious appliances which I caused to be made, from simple pads to cup-shaped discs, in order to retain refractory reducible and irreducible hernias and incarcerated hernias. The latter especially caused me much trouble. No one who has not tried to prevent, by means of a truss, new fragments of bowel from coming down in an old case of irreducible hernia, has any idea of the mechanical difficulties to be met.

During this time, however, I made the operation for the radical cure on every case of strangulated hernia for the relief of which I was called upon to operate. In studying my results I became convinced that the postulates in regard to age so generally admitted were not wholly true, and that age played a less important part than is generally believed. I have therefore asked myself three questions, which I have tried to answer from my own limited experience.

1. Is it a fact that, because strangulation has been avoided during the active period of life, or for many years, that the dangers of this deplorable condition supervening is in any degree lessened?

Thirty-three cases of strangulated hernia of which I have the histories have been sent me for operation. Of these 33 cases, 1 was four years of age, 1 was eighteen years of age, 2 were between twenty and thirty years of age, 5 between thirty and forty, 7 between forty and fifty, 5 between fifty and sixty, 8 between sixty and seventy, 2 were seventy-one, 1 was seventy-three, and 1 was seventy-five. Summarizing, there were 33 cases, of which 48 per cent. were under fifty, and 51.5 per cent. were over fifty years of age. In other words over one-half of the cases were over fifty years of age.

Some of these cases gave a history of having a hernia for forty years or more, several of having never worn a truss, or having worn one for many years and then having discarded it, while still others testified that they had worn a truss for many years successfully, but as age advanced were unable to successfully retain the protrusion by mechanical means. It would seem, therefore, from this record, that the danger of strangulation increases rather than decreases with advancing years. In this my experiences are also borne out by the reports of Dr. Oscar Henggler, of Zürich. One of his deductions from the analysis of 276 cases of strangulated hernia operated upon in the University clinic at Zürich is the following: "Up to the age of twenty years strangulation is rare, but gradually increases until between fifty and seventy years, when the largest number of strangulations occur."

2. Have operations for the radical cure of hernia after fifty years a much greater mortality than before that time? The answer to this question in the case of strangulated hernia is not so definite, because the mortality is modified in so great degree by the length of time during which strangulation has existed.

Of 33 operations for strangulated hernia there were 9 fatal cases—1 in the period between thirty and forty, 2 between forty and fifty, 1 between fifty and sixty, 3 between sixty and seventy, 1 at seventy-three, and 1 at eighty-three—a mortality of 27.3 per cent. In the 17 cases over fifty years of age there were 6 deaths, a mortality of 35.5 per cent. In the 16 cases under fifty years of age there were 3 deaths, a mortality of 18.7 per cent. This would show almost twice as great a mortality for strangulated hernia in the aged.

When, however, the duration of the period of strangulation is considered, even this unfavorable prognosis is modified, for, of the six unfavorable cases, not one was operated upon during the first twenty-

four hours, while, of the eleven favorable cases, there was only one in which the strangulation had existed over two days, and this group included one patient seventy-five years of age, another one seventy-one, and another one seventy years of age. Thus it would appear that while the mortality of strangulated hernia treated by operation is greater among the aged, even this is dependent more upon the duration of strangulation than upon the age of the patient. In this respect my results, so far as the mortality is concerned, agree with those from the report to which I have heretofore referred. Henggler's statistics show a mortality of eight per cent. for the first twenty-four hours, twenty-two per cent. for the first forty-eight hours, forty-five per cent. for the first seventy hours, and sixty per cent. for longer duration. Age seems to have little effect in operations undertaken for the radical cure of hernia in uncomplicated cases. Thus, in 135 consecutive uncomplicated cases, I have not had a single death, although, as the next item shows, a number were over fifty years of age.

3. Is permanent cure in the aged probable? My statistics are based upon a small number of cases, and while, therefore, not entirely conclusive, are still interesting. I have had, among the 135 uncomplicated cases, 19 over fifty years old, which, added to the 11 cases of strangulated hernia in patients over fifty years of age in which the patient lived after the operation, makes a total of 30 cases. Of these I have, in the short time which I have devoted to this paper, been able to get the subsequent histories of but 21. None of these have relapsed. Two of them are of too recent date to be of any value, it is true, and of the remainder 2 died from other causes before the two-year time limit was reached.

There remain 17 cases of permanent cures. One of them is the patient seventy-one years of age noted in the operations for strangulated hernia. She is now seventy-six and in good health, with no signs of returning hernia. Another is the case of the patient seventy-five years of age referred to in the list of strangulated hernias, and is now seventy-seven.

This showing is therefore equal to that for the radical cure in early life, but of course it is to be remembered that many of the patients indulge in no active employment, and that the utmost care is exercised in all, a condition which cannot be met with so generally in early life.

I deduce, therefore, from the results here presented, (1) that the radical cure should be attempted in all cases of strangulated hernia operated upon even in the aged; (2) that the risk of operation for the radical cure, in uncomplicated cases, is no greater in the aged than in those of less mature years; (3) that as good a percentage of permanent cures is offered after fifty years of age as before that period.

Discussion.

W. S. Briggs, M.D., St. Paul, Minn.: This subject the doctor has so thoroughly considered that there is little to add. It seems to me dif-

ficult to set an age after which the patient may be said to have passed the time of active life. Some who have led temperate lives still have great recuperative power at an age where little or none is shown by others who have led intemperate lives or have a bad family history, so we cannot lay down any rule as to the age when we shall operate or cease to operate. It is the condition of the patient which should govern, be he ten or fifty years of age. In strangulated hernia there is no question; I should advise the radical operation, no matter what the age; it adds but little to the risk, and you get better results. As to ordinary hernias, uncomplicated, shall we operate on them? After the age of fifty it should depend upon the condition of the patient. But to say that we should not operate, because there has been no strangulation, is not surgical. We should operate in hernia, and whenever we have the chance. As to the mortality in cases of over fifty years of age, there are several reasons for it. Many of them have had attacks before, so they put off operation for twenty-four or forty-eight hours with an increasing mortality-rate. After seventy-two hours it reaches sixty per cent. The patient had been taught to fear the mortality-rate in old age until he wants to put it off until he is nearly dead. He asks if we get good results in the aged; I tell him yes. The old idea that the wound will not heal is wrong; we get more ventral hernia under fifty than over. This may be because the older men take better care of themselves and do not do hard work afterward. I think statistics will show more bad results in the young than in the old. The author, with fourteen per cent. of all cases operated upon being in old people, has found the results equally as good as in the young. He has not lost a case out of one hundred and thirty-five operations, yet over fourteen per cent. were over fifty years and some were over seventy. I heartily concur with the doctor in his summary.

CHARLES W. EATON, M.D., Des Moines, Ia.: Just a few words as to the surgical evolution of hernia. Many of the conditions for which abdominal section is now made were not understood for a long period. Hernia was so old and familiar that our acquaintance with it was greater and dates back to the time when abdominal surgery was considered extra hazardous. We remember McDowell and his first laparotomy. For many years the subject of hernia has been thoroughly familiar. Since abdominal surgery has become comparatively safe the operation for hernia has been dragging along behind, because of this old idea. I believe that this in part explains the conservatism in advising patients not to submit to a herniotomy, and why the non-surgical methods have been so much used. Personally, I feel much indebted to Dr. Shears for his paper, and most heartily concur with Drs. Shears and Briggs in saying that the age question may be eliminated. The most successful and satisfactory experiences I have had have been after middle life; and the most unexpected recovery, both as to life and the non-reappearance of hernia, was in a case of over seventy-five. I believe we have feared too much a failure of the power

of local repair, that inadequacy of tissue vitality which finds its extreme expression in senile gangrene. I am glad to see that in recent works there is a growing sentiment in favor of operation for the cure of hernia. Dennis places the mortality of all operations at one and one-half per cent.; and, whether it be Bassini's method or others, I believe that our progress will be in the way of putting operations for the cure of hernia alongside other abdominal operations, because the factors for safety apply to hernia with just as much force as to other abdominal operations.

G. F. SHEARS, M.D., Chicago, Ill. (Author): The fatal cases had no renal or vesical complication; all died of peritonitis. As to the cause of hernia, I believe it is generally due not so much to acquired weakness or to degeneration as to an arrest of development; nearly all hernias show themselves early in life and seem to be along the same line as hare-lip, club-foot, or defects of the palate or fauces. On Wednesday, before leaving home, I operated upon a case of hernia. I could detect no bulging on coughing, but the patient could not wear a truss with comfort, and he complained constantly of "something dropping on the inside." I opened the canal and found there a piece of gut. There had never been an entire closure of the canal. The case was one of congenital hernia with incomplete closure at the internal ring. The patient was twenty-four years of age, and the case would naturally be looked upon as traumatic, but we demonstrated an open canal from the peritoneal cavity to the testicle, and its congenital character could not be doubted. If you operate upon a patient for the cure of hernia and there is no return in six or eight years, about as near a cure has been made as could be reasonably asked for. I have had this result many times.

Proposed Paper on the Operative Treatment of Inguinal Hernia.

BY OSCAR LESKURE, M.D., DETROIT, MICH.

1. Forced interference and other methods and statistics.
2. Advance under aseptic surgery.
3. Modern methods with statistics.
4. Choice of Halstead's operation, with reasons for choice.
5. Advocate operation for radical cure in adults as rational treatment based on safety and results.

Operative Treatment of Inguinal Hernia.

By William Davis Foster, M.D., Professor of Surgery Kansas City Homœopathic Medical College.

The proposal to cure hernia by a radical operation is such a comprehensive one that a little thought is necessary to fully grasp its scope. The most carefully prepared statistics show that one person out of every eight of our population has hernia: that means that there are in the United States eight millions of hernias. Six millions males and two millions females thus afflicted. The operation for radical cure, therefore, has reference to this vast number of persons. The first systematic work on this subject was that of Dr. Joseph H. Warren, of Boston, published in 1880; the next was that of Dr. H. O. Marcey, published in 1889. New editions of these authors have rapidly followed. The essentials first enunciated have met with little modification, and the principles first elucidated are found to be sound.

Without, therefore, going into a detailed description of the various operations proposed for the cure of this infirmity, it may suffice to allude later on to one method only, which appears to meet all the conditions in a very satisfactory way.

Before deciding upon any cutting method for strangulation, it is usually advisable to give some consideration to

Taxis.

This classic word "taxis" is derived from the Greek, and means "to arrange." It is a "methodical pressure exerted by the hand on a hernial tumor for the purpose of reducing it." To perform the taxis, place the patient in a position to relax all abdominal muscles which contract around the mouth of the sac; fix, as far as it is possible, the mouth and the neck of the sac with the fingers of one hand, while the fundus of the tumor is held in the palm of the other, the object being to dilate the mouth of the sac and diminish the bulk of the protrusion, the fact being borne in mind that irreparable injury is frequently inflicted upon the herniotic bowel by violence, and the danger of mischief by the use of the taxis increases in proportion to the length of time the bowel has been strangulated.

As soon as the muscular contraction ceases, make gentle and well-preconcerted pressure, and if the taxis succeed, the tumor will gradually become softer or less elastic, smaller and of different shape, until it escapes from the mouth of the sac, accompanied by a gurgling sound, and returns to the abdominal cavity.

The taxis should be aided by the use of chloroform and inversion of the patient. By inversion is meant the patient should be grasped by the feet and turned upside down, the head and shoulders resting upon the bed or floor. Before it is practised, the bladder and the rectum must be emptied.

The circumstances of the case will largely govern the surgeon in his behavior. In general, it is correct to resort to the taxis in recent cases of strangulation before symptoms of shock or collapse have appeared. Sir Astley Cooper cites a case in which the patient died within eight hours after strangulation supervened, and Baron Larry mentions one in which death took place in a still shorter period. It is proper in those cases, generally, in which there are no urgent symptoms. If strangulation has existed for such a length of time as to produce inflammation, adhesion, rapid pulse, and accelerated respiration, with stercoraceous vomiting, the taxis is clearly contra-indicated and must not be resorted to at all.

The length of time the taxis may be continued will vary with the age of the patient, constitutional conditions as to health, the condition of the hernia when first seen by the surgeon, the existing symptoms as to respiration, character of vomiting, pain, and all the conditions present. The environment of the patient will also, in many cases, exercise a controlling influence. By environment is understood whether the patient is treated in the hospital or in private practice in the city or country. In the hospital very little time is lost in practising the taxis; in favorable cases, where the conditions will warrant, this manipulation will be tried for a short time, say from ten minutes to half an hour; this allows time enough to get the instruments ready to operate. At the expiration of this period, the hernia not yielding, herniotomy is promptly done. In private practice in the city, taxis is only practised till the consent of the patient or friends is secured to operate in cases of necessity. The taxis failing to restore the rupture, herniotomy is immediately made. In the country, where the patient is remote from a surgeon, in cases in which the strangulation has existed for some hours, it frequently happens that the period for application of the taxis is past before the arrival of the medical adviser, and the patient succumbs under the most unfavorable circumstances.

It is perfectly clear to the writer's mind that there is more danger in the taxis when prolonged by unskilled manipulation than there is in the operation of herniotomy; that most of the cases of death which result from strangulated hernia may be said to have been caused by ill-advised taxis by unskilled persons, by delayed consent of the patient or friends to operate, and by failure, in some cases, of the surgeon to advise early operation.

Furthermore, it is true that if laparotomy is made early, then the operation for radical cure may be practised in many cases, and the possibility of subsequent strangulation certainly removed. When done under the most scrupulous cleanliness, the dangers of herniotomy and the operation for radical cure are very slight.

An inquiry into the history of operations for the surgical cure of hernia discloses the fact that very little was done in this direction until within the last eighteen or twenty years. It is altogether probable that from the very earliest times mankind has been afflicted with hernia. Many of the ancient operations for the cure of this affliction have come to us from the early surgeons; it is most likely true that the wandering nomadic tribes of the East, as well as the builders of the Egyptian monuments, were familiar both with the malady and the methods of cure. No doubt the ancient Israelites were well acquainted with this infirmity, its cause, prevention, and treatment. Phimosis being a common cause of hernia in children, by producing straining, it is no stretch of truth to infer that circumcision was found to be a preventive. Modern writers, previous to Warren, generally ignored the subject, or treated the proposed operations with suspicion and contempt. The methods then practised were crude and non-surgical. In the early part of the present century, Langenbeck, Schumacker, the Coopers, Gerdy, Bonnet, Velpeau, Pancoast, Jameson, Riggs, and other surgeons made operations for radical cure with success. It is also very certain that all of the earlier operations fell into deserved desuetude and were mostly lost sight of until the antiseptic views of Lister arrested the attention of the surgical world and gave new impulse to every department of surgery. The early surgeons cultivated laudable pus; the present surgeon sets into operation every possible known agent to prevent the formation of pus; and when pus is found to exist, by the use of antiseptics he endeavors rapidly and effectively to arrest the suppurative process.

HERNIOTOMY.

Operations for herniotomy are familiar to all. By herniotomy I mean, strictly, the operation for the relief of strangulation only. These are historic, and it strikes the modern surgeon as singular that the older operators (should for most part) make a herniotomy without resorting to any method to accomplish a radical cure. The fact is that herniotomy in the past fell into disrepute in consequence of the high rate of mortality following the operation. In this respect a parallel process of reasoning condemned, not many years before, the operation of trephining the cranium for gunshot and other injuries. It is stated, in "The Medical and Surgical History of the War of the Rebellion," that the mortality-rate following trephining in some of the modern European wars was so great that its practice was interdicted by the ablest surgeons of the day. A late writer, in discussing this question, justly observes that the high death-rate following the operation of trephining was not the result of the operation itself, but that death resulted from the injury which rendered the trephining necessary. It is equally true that most of the deaths which followed the operation for herniotomy have resulted, not from the operation

itself, but from the fact that the condition of strangulation which rendered herniotomy necessary had already produced such pathological changes as to render death inevitable.

Surgeons of the present day take notice of these facts and operate early, before tissue changes to any great extent have occurred, and then, in suitable cases, follow the release of strangulation by some of the varied methods for radical cure. Different operators for radical cure practise and advocate different methods; the object to be attained is the same by all. Whatever method secures the desired results must certainly be commendable. Statistics show that deaths from operations for radical cure of hernia, in the hands of competent operators, are extremely rare; and when the early operation is done properly under aseptic conditions, the cure is practically certain.

It is well known that many hernias are cured by wearing trusses. It is proper to try this method for a reasonable length of time. How does a truss cure a hernia? The answer to this is that the friction created by the pressure of the truss causes the exudation of the plasma, which becomes organized, producing adhesion of the pillars of the ring through which the hernia has escaped. The various surgical proceedings for radical cure have in view the same result by a different method.

It is then advisable, after all other measures have failed, to resort to the operation for radical cure. The important problem now arises: By what method shall the attempt be made to cure hernia? The answer to this is that an operation must be made which will meet most surely, on surgical principles, the peculiarities of the case under consideration. Varying conditions and complications require diverse expedients for their relief. It may be concluded that, keeping in view the safety of the patient and the certainty of cure, that procedure which most surely secures these ends is to be chosen. In regard to the injection method, known also by the name of Heaton, its originator, it may be briefly said to have a limited field in carefully selected cases in which there is not any sort of adhesion. In old, large, crural, omental, and various other varieties of hernia, the injection method is unavailable. We are, then, brought to the point where a choice must be made of some of the cutting methods with attendant technique.

LAPAROTOMY.

After a laparotomy is made, the success of the whole proceeding depends upon the four following steps, namely:

1st. The management of adhesions.

2d. The management of redundant omentum.

3d. The management of the sac.

4th. The management of the wound.

1st. The management of adhesions. It is found that in ancient ruptures, where the hernia is large and a truss has been worn for

a considerable length of time, adhesions exist to a greater or less extent. The contents may be adherent to the sac; the sac is frequently adherent to the abdominal rings as well as to the coverings of the cord and the tunica vaginalis generally, and all the tissues with which it comes in contact. Where the lesion is complicated with hydrocele, in cases of strangulation, difficulties of diagnosis arise, and the dissections necessary to free the adhesions are sometimes very nice. No matter where found, adhesions must be effectually released in order to permit the hernia and the sac to return to the abdominal cavity.

2d. The management of redundant omentum. A considerable portion of every large hernial tumor is composed of omentum. This tissue should be ligated, freely cut away, and the stump dropped back into the abdominal cavity. Where the mass to be dealt with is very large, it should be securely ligated, in sections, with aseptic silk.

3d. The management of the sac. The pouch of peritoneum should be carefully pulled out as far as possible without exerting undue strain, ligated with aseptic silk even with the internal ring, cut away about one-fourth of an inch outside of the ligature, and dropped into the abdominal cavity. This will have the effect, among others, of restoring the symmetrical contour of the peritoneal cavity, thus doing away with the hernial pocket.

4th. The management of the wound. By this is meant the placing of the sutures which are to restore to their normal place and close the abdominal rings, together with the overlying tissues. The best and most effective way to do this is, first, to begin at the upper margin of the internal ring, use the cobblers' suture, with silk, about six to the inch; push the spermatic cord and vessels toward the symphysis pubis, and be careful that the external ring is not closed so tightly as to cause pressure on these vessels. Bring together with the aseptic silk the muscles and the fascia, being sure to take into the grasp of the sutures the aponeurosis of the muscle, if any be present, together with the connective tissue. Finally, close the integument with silk-worm-gut or silver wire, and hermetically seal the wound with a collodion dressing; finish the dressing with aseptic gauze, cotton, and binder, or adhesive straps.

Marcey (" The Radical Cure of Hernia ") summarizes thus: " The aseptic suture must be aseptically applied in aseptic structures, and the wound must be maintained aseptic." Every possible precaution should be practised which will tend to insure primary union. Wherever healing proceeds through process of suppuration, the resulting bond is cicatricial. This tissue is of low vitality, poor resisting force, and is to be in every possible way guarded against. It is curious to note that one of the foremost surgeons of the day, one who has done much to popularize operations for radical cure, should advise the closure of the wound by cicatrization, claiming that in this way a more enduring bond of union is established than by any other method.

There is a notion prevalent, not only among professional people, but also wide-spread among the laity, that operations for hernia are

not only dangerous to life, but frequently fail to cure the rupture. Nothing could be more erroneous. It is perfectly certain that there is more menace to life from the hernia itself than there is from the surgical operation undertaken for the cure of hernia. This is true in general. It is emphatically true in regard to femoral hernia, the form of rupture mostly found in women. The canal through which hernia escapes, the crural ring, is frequently extremely narrow. In case the hernia is composed of intestine, the dangers of strangulation are very great and death is rapid, the patient going into collapse and passing beyond surgical remedy before a decision to operate has been made, or before the surgeon can reach the patient. The day is near at hand when surgeons will advise, and people will be ready to accept, operations for radical cure in every case where a cure by other means has failed. I am not quite certain in my own mind whether it would not be better, in case of congenital hernia, to resort to an operation for radical cure, in preference to the uncertain, very annoying, and often futile attempt to cure by the application of trusses and manipulation.

This question is of such importance that its free discussion by surgeons should be encouraged, and the result of operations for radical cure be widely disseminated, so that the prevalent errors may be speedily done away with.

H. F. Biggar, M.D., Cleveland, O.: I have listened with much interest to the reading of the paper and the discussion. There are good reasons why herniotomy is not a more successful operation. It is a medico-surgical disease, and we often forget the medical side of the disease. Failures after operations may be due to a general disordered state of the system, or from some local cause, as a degeneration of muscular or tendinous tissues; or from weak structures forming the walls of the abdomen in those regions in which hernia most frequently occurs. There are certain depressions or foveæ into which the abdominal contents naturally tend to force themselves in effecting their escape from the abdomen, and are important factors in the causation of hernia. General medication and local medical applications, or general and local massage, may prepare the way for a successful operation. Should prostatic enlargement exist, or a strictured urethra or phymosis, or an adhered prepuce, they must be corrected before you can expect success following an operation. This feature is more important than the method of operating or the kind of suture material that shall be used, or even the kind of suture. So far as the method of operation, the disposition of the spermatic cord is the most important. Use any method you please, but if you leave the spermatic cord lying in the canal or coming out of the internal or external ring, there is a weak point.

The method of operating for inguinal hernia by Nélaton and Ombredanne, is by diverting the spermatic cord from the inguinal canal and causing it to run through a hole made in the os pubis.

By this method the inguinal canal is treated without regard to the spermatic cord, and is more effectually closed than by the method of Bassini or that of any other operator. The technique is as follows: Slit up the inguinal canal, reduce the hernia, and remove the sac; free the cord from all adhesions and the cremaster muscle, then slit up the posterior wall of the canal. A button of bone as large as a ten-cent piece is removed from the os pubis at a point about one-third of an inch below the upper border; this is effected by means of a punch-like instrument, a chain-saw is then passed through the hole and the bridge of bone is divided at its inner edge, preserving its periosteal connection. This bridge of bone is then raised inward by means of forceps, and the cord is dropped into the perforation, after which the bone is replaced and secured in position. The abdominal wall is repaired in two layers. The canal is treated without the cord, the cord is dropped into the abdominal cavity and made to run through a hole made in the os pubis. In case the tunnel so made should throw out a deposit which bore upon the cord, causing œdema or varicocele, then liberate the cord by cutting a channel downward and dropping the cord beneath the bone. I should advise two punches, different in size, after using the smaller, carefully dissecting up the periosteum, so that when using the larger punch the periosteum will not be injured and will then serve as a lining for the tunnel and thus prevent any filling up of the tunnel with bone. This gives us the most perfect and radical cure for inguinal hernia.

Conservatism in the Treatment of Hernia.

By Charles E. Fisher, M.D., Chicago, Ill.

The conservatism which conserves the life and health and strength of the patient is the conservatism which should ever be observed in the management of hernia. No conservatism is worthy of the name which contemplates inaction in the face of possible danger in the first degree, nor is a conservatism, so-called, worthy of the serious consideration of either physician or surgeon which is made to bear the burden of negligence when strangulation is present or reasonably likely to occur. Not infrequently, through misinterpretation of the term, saving surgical measures are denied or withheld from the patient until his case is practically hopeless, and it is a chief object of this brief paper to record emphatic protest against inaction and delay in the face of well-recognized surgical principles and conditions.

All hernias are more or less liable to become serious at some time during their course. The smaller the opening, the greater the danger. Large sections of gut may extrude through an opening of considerable size and be returned at convenience without as much likelihood of serious consequences as attend the insignificant little protrusion which hardly requires the support of a truss. Notwithstanding the fact that a large proportion of male adults are afflicted with ring-lesions sufficient to admit of protrusion of more or less of the intestine, and notwithstanding the fact that a good share of the operations to be witnessed at the various hospitals and clinics of the country, and in private surgical practice as well, are for hernias which have at some time become strangulated, the indifference of the general practitioners, even in the face of imminent danger, is sometimes appalling. No conservatism which fails to recognize the liability of strangulation in almost all cases of hernial protrusion should be allowed to enter the physician's mind, since herein lies the risk of the most pronounced and disastrous conditions which overtake this class of patients. The best conservatism, therefore, is that conservatism which conserves the best interests of the sufferer, whether those interests demand prolonged resort to taxis, external applications, profound etherization, intestinal ballooning, or radical operation.

When strangulation occurs to that extent that the patient finds it impossible to return his hernia, the time is almost always at hand for surgical interference. Taxis may be employed with gentleness and intelligence over a considerable period of time, but it should never be prolonged until constitutional symptoms, as exhaustion, severe suffer-

ing, rapid and feeble pulse, evidences of approaching collapse, etc., have made their appearance. Nor should local etherization, or even surgical etherization, combined with heat and taxis, be carried to that extent, that constitutional conditions which indicate the approach of intestinal injury are manifested. Every case of strangulation immediately becomes a surgical case; not necessarily an operable case, it is well to remember, but a surgical case, and in all such cases the best skill of the surgeon is demanded. If, perchance, he is able to reduce it by position, taxis, anesthetization, and other non-operative means, so much the better for the strangulation. But if he be not easily successful in his efforts, the conservatism of the knife is demanded, and that imperatively.

Remembering that the strangulated portion of gut has its blood-supply seriously interfered with from the moment strangulation occurs, and forgetting not that there are no constitutional radiagraphs of intestinal necrosis to be depended upon absolutely in every instance, the hernia which is knuckled in the ring so positively that it cannot be readily returned to the abdominal cavity is one for open investigation. Hernias are not infrequently reduced after serious gut-lesions have made their reduction possible, but more dangerous to the patient than his first condition. It is not enough to be able to return the gut; it must be returned in a reasonably healthy condition. How can it be said that this is the situation unless it be seen and felt, especially after considerable length of time has elapsed after strangulation has taken place and when taxis amounting to severe manipulation has been employed in securing the reduction? No hazard in surgery is so great as the hazard of blindness.

It should not be required, in the consideration of this topic, that a time-limit be placed for guidance in operating. As in medical practice, so in surgical—the condition of the patient rather than the dial of the clock, or the calendar, should be the index for the best work. Given a patient with strangulation, not readily reducible by himself nor immediately reducible by the physician in attendance, and especially not readily reducible by the surgeon called in consultation, and his case is operable the moment the pulse begins to flag, or to be unduly accelerated, especially if it become tense, small, and rapid, and the knife must be thought of. If, in addition to the above-recited symptoms, he shows signs of anxiety—physical anxiety is meant, and not mental apprehension, and if coupled with this there are evidences of oncoming regurgitation of food and liquids, with perhaps stercoraceous odor, the operative stage of the case has not only arrived beyond peradventure, but it may even have passed, and the stage of emergency may have arrived. The tumor may have become more or less congested and tumefied; it may have decreased in sensitiveness; an areolar geography may have become visible; the tongue is perhaps dry and parched, or leaden and cooler than normal; the temperature may be up one, two, or more degrees, or, worse, it may have gone below the standard of health; vomiting, belching, and regurgitation are present in severer

cases, and the conditions have become desperate. True conservatism will never allow this picture to show in hernia. The conservatism that conserves will anticipate all extreme conditions, and call into requisition the skilled aid of the surgeon, whose presence and art are the only saviours in a very large per cent. of cases which strangulate, no matter how apparently insignificant the strangulation may at first appear.

It had been my thought to illustrate this paper with the recital of several cases in point which have come under my observation in recent months, but upon further consideration it has been concluded that since they offer nothing out of the experiences of all operators, it may be as well to limit the bounds of my effort to an earnest plea for the abandonment of the misuse of the chief word of my text, and the adoption of it in that sense which implies the very best that is in store for the subject of strangulation. Perhaps, in the discussions of the day there may develop sufficient testimony along the line of thought herein suggested to convince the general practitioner who may attend these sessions that his duty is never done in a case of strangulated hernia until he has availed himself of the art of surgery before such a degree of disorganization, even necrosis, of the sac and gut has occurred as to render his case a hopeless one and an additional stain on the escutcheon of his profession.

Discussion.

W. E. Green, M.D., Little Rock, Ark.: There are two conditions under which I dislike to open the discussion of a paper. One is when I have not had an opportunity to give proper consideration to the paper, and the other is when it is so well written that there remains little or nothing to be said. Dr. Fisher has been very badly spoiled, and I dislike to encourage his vanity by complimenting his paper. While at dinner to-day, he handed me his article to read. I told him it was a very poor one, and advised him by all means not to read it; but now, to be frank with you, and to do justice to him, I must state that it is a most excellent paper, and he has covered the grounds so thoroughly that there is very little left for me to say upon the subject. I should like, however, to express my convictions on some special points. Hernia is strictly a surgical disease, and a man not surgically versed should ordinarily not take charge of such a case. It is to the interest of both the physician and patient to turn such cases over to a competent operator. I do not believe in taxis in strangulated hernia. If strangulated, and the patient has not been able himself to reduce it, it is better to waste no time on it, but operate at once. Any extended effort at a reduction is far more dangerous than a well-executed operation for its relief.

There may be considerations and conditions of health which would forbid immediate operation and confinement to bed, and it might be

best to postpone the operation until some other time. In young children hernia is very often cured by a well-fitted truss or pad, therefore it is well with them to try this plan of treatment, especially since the operation is more dangerous in children than in old persons.

W. A. FORSTER, M.D., Kansas City, Mo.: I have had some experience with hernia, and always considered it a surgical disease from the start. Many cases may be retained with pad or truss so it will not be necessary to operate. I have taken it as a rule that conservatism means inefficient or timid surgery. Then, as to taxis: of course in all cases it is not necessary. If we have a case of hernia in a middle-aged person and it becomes strangulated, why should we spend much time on taxis? It has come down once and probably will return if reduced, so why waste time in taxis, lessening the patient's chances, adding insult to injury, setting up inflammation, or pushing gangrenous gut back into the abdominal cavity? I believe in early operation for relief. If you find it to be a case for suturing, all well and good. If you find the gut in such bad condition that it cannot be saved, you may resect; but the blind method of going at it is not proper. Adherent sac or omentum may give rise to a great deal of trouble. There may not be much stricture and the matter may go for days or weeks without causing the patient so very much pain; yet another case may die for want of an operation within twenty-four hours. We should be very careful in making up our minds whether it be an operative case; it is largely a matter of diagnosis. Open the canal early rather than take too many chances. The danger of investigating the ring by free incision is less than that of taxis.

C. B. KINYON, M.D., Ann Arbor, Mich.: A few weeks ago there came under my care a patient whose recent hernia had been reduced by taxis, but who still had stercoraceous vomiting. I was somewhat puzzled, as there was no protrusion and the patient seemed in good condition. I opened the abdominal cavity, making a good long incision; I was glad I did, for we found that the hernia had been reduced en bloc, or en masse, and the strangulation still existed. As there was more than a suspicion of gangrene, I thought the safest way would be to bring the bowel out and watch it. The first sign of life was the glistening condition of the peritoneum, next better circulation, and we finally decided not to resect. It is well to bear in mind the danger of reduction en masse. This case presented a strong argument in favor of radical operations in cases where there are any adhesions.

Post-Operative Hernia and Its Treatment.

By James W. Ward, M.D., San Francisco, Cal.

The restless spirit of the present era, that is satisfied only with the ideal in surgery; the mature observations drawn from inspection of an imperfect abdominal cicatrix; the larger experience with the newer and better aseptic methods in wound contact, are each accredited as being the essential factor, leading to the gradual but positive disappearance of post-operative hernia.

Throughout the discussion in all its aspects the prime importance of antiseptic measures, reaching through improved technique to absolute asepticism, is forced as a final conclusion.

It yields, therefore, to argument, that with correct adjustment of the uniting forces, and the absolute purity of procedures, the quota of requirements is largely complete for universal success.

No matter what our prejudices or preferences may be toward the vaginal route, in any event the abdominal incision, either central or lateral, will often be preferable, and hence the possibility of future hernias. Those cases requiring incision in the loin, where the muscle and fascia afford less protection, will especially be exposed to the risk of weakened parietes. The practical utility of the subject becomes, therefore, obvious.

Early in the history of abdominal surgery everything was good if only life was saved, little attention having been paid to the parietal incision, either in the making or the closing of it. Now that the essential end of life-saving has been attained, we can turn more accurately to the discernment of the conditions leading to the imperfect healing of the abdominal wound, and give closer attention to its closure.

It will be my present purpose to discuss the principles that should serve the surgeon in this subsidiary but highly important part of intra-abdominal work.

I desire to consider the subject in relation, I. Pathological conditions coexisting. II. Restoration.

I. *Pathological Conditions Coexisting.*—The cause of post-operative hernias is not identical in all cases, and therefore the pathological changes are varied. A scarcity of supporting sutures in the abdominal wall, insufficient support to the cicatrix during and subsequent to convalescence, imperfect adjustment of corresponding structures in the wound, and, lastly, with defective vitality and impure methods, we have the chain of etiological factors, any one of which is capable of creating permanent mischief in the divided tissues. I have now

in mind more than one case, where undue development of adipose tissue following the operation at the menopause contributed at least to the development of the condition under discussion. There can be no value in noting varieties of hernias, for all are the evidence of a common process of wound impairment to a greater or lesser degree, with or without complicating change. According to my observation, the muscles and the deep fascia separate, when intra-abdominal pressure becomes sufficient, and the peritoneum with the superficial structures which covered the intestines and omentum, are projected forward into the opening. The peritoneum soon becomes adherent to the skin, although it does not always follow, unless suppuration has pre-existed, that the intestines or omentum are adherent to the peritoneum. These hernias gradually increase in spite of precautions and careful support, but I have never observed strangulation.

The patient rarely complains of pain, the muscles retain their functions, and but for a sense of insufficient support at the seat of hernia, the patient would be difficult to persuade to submit to an operation for its repair. At times, however, the symptoms are more pronounced and suggestive of greater lesions.

Von Bergmann, in a clinical lecture three years ago, detailed cases in which the best specialists of Berlin and Paris had diagnosticated gastritis, ulcer, or cancer of stomach, and had persistently employed lavage, rigid diet, and the other of their most approved modes of treatment, without relief. Hernia in the linea alba had been discovered, operation done, and relief followed in every case.

Koenig draws a vivid picture of the symptoms produced by the trouble, which simply accentuates the experience of Von Bergmann. He says, "The characteristic ruptures which evoke suffering in the stomach regularly have—we speak at least from our own experience—either a small mass of omentum in the sac, so that it cannot slip back on account of the narrow neck, or a strip of omentum has become adherent in the sac, and perhaps also to the border of the neck.

"In the cases in which we could follow it, this band passed to the greater curvature of the stomach, so that when the stomach was moved the band of omentum was dragged upon, and only by the complete severing of this band could the symptoms be relieved."

The picture is very distinct. Even where the hernial sac is small, the strand of adherent omentum is an almost constant accompaniment. The traction upon the greater curvature of the stomach produces most distress immediately after the ingestion of a meal, or when the stomach is filled with gas. This fact gives additional evidence of gastritis, ulcer, or cancer. The symptoms produced are often out of proportion to the anatomical changes.

Severe, constant, or often recurring pain does not necessarily indicate a pathological condition within the stomach, but may be entirely extrinsic, impressing on the physician the need of the utmost care in examination of patients whose post-operative history shows suffering along the line of a pre-existing incision.

It is held that an incision in the linea semilunaris is surgically almost the same as in the linea alba. Some hold that it should, however, fall to the inside of the fascial line, because thus we limit the weakening of the parietes to the minimum.

If the fascia is accurately divided, a delicate line of cicatrix is all that is left to counteract the tendency to gaping which the united action of the flat muscles induces. If the sheath is entered by division of the anterior layer of the united aponeuroses, the muscular fibres pushed inward, and the posterior aponeurosis divided opposite the line of the anterior, we get, if subsequent suturing is properly carried out, a broad concavo-convex apposition of surfaces, which is more fully able to sustain subsequent intra-abdominal pressure.

The development of the recti muscles is by no means equal in all cases; while not providing a persistent element of success in every case, it should give greater support to the value of the more common incision through the linea alba. The strength of the aponeurosis is, on the contrary, more uniformly developed, in the light of my own experience, and offers thereby greater security toward a strong cicatrix. In case of diastasis of the recti muscles, that method is the best which will enable the surgeon to secure a firm abdominal wall, with the recti muscles in apposition and a sound union of the aponeurosis.

The length of the wound influences the risk of imperfect closure but little, except so far as imperfect approximation and latitude for infection is permitted. Ample incision through which the surgeon can manipulate without bruising and lacerating its edges, which produces thereby superficial necrosis of the tissues, and greatly diminishes the probability of union by first intention. Necessarily, whenever the slightest evidence of septic infection develops there is open the possibility of a weakened spot, with the chain of symptoms and train of ill effects that follow, nor does the length of incision have more than infinitesimal influence on the mortality.

The same cannot, however, be said of the location of the incision. It may be definitely stated that the line of parietal incision should be made parallel with the direction of the most important muscular fibres. If there is one intact layer of muscle behind or in front of a divided fascia, the risk of hernia is much diminished.

If the sheath of the recti were not frequently opened, thereby bringing the muscular fibres directly into the wound region, the division of the linea alba or the linea semilunaris would be followed by hernia more often than now. An incision affording efficiency during the operation is never too long. The stretching, traction, and trauma inflicted on a short wound is often sufficient to favor necrosis of its edges, and imperfect repair.

Wounds that divide the rectus, or those created through the linea semilunaris, as the Langenbeck incision, leave the abdominal wall permanently weakened. For the prevention of hernia, the usual incision for approaching the vermiform appendix is not so good an incision as one almost radial, following the fibres of the internal oblique,

but unfortunately such an incision, in place of leading toward the disease, tends further away from it. Separation and retraction without division of the internal oblique and tranversalis, is certainly preferable to their division, providing it can be done without trauma.

Looking at the mere question of its effects upon the abdominal wound, we find that the percentage line of local suppuration conforms in a most remarkable way to the rise and fall of drainage line. This retardation of the healing may be explained to a certain extent by the mere mechanical injury to the tissues, from the presence of a foreign body like gauze or tube, and thereby weakens the parietal wall.

Hernia complicated by pus foci or fecal fistulæ tax the skill and the patience of the surgeon to the utmost, but fortunately seldom remain to remind the patient of the surgical misfortune. Inasmuch as wound infection overshadows all else in the production of hernias, therefore the use of the tube or the gauze drains offers great possibilities.

When an incision is closed without drainage, if there has been no undue injury to the tissues and the operation has been conducted aseptically, we always expect union by first intention. Following the removal of a drain, healing in its tract can only take place by granulation process, which is necessarily slow, with newly formed and weakened type of tissue.

This leads me to the second topic:

II. *The Restoration.*—The continued palliative care of a herniated mass brings meagre comfort, with no hope for cure, often permitting a real trouble to grow until conditions become such that relief by the most skilful surgery is difficult and of uncertain result. In most repeated operations the cicatrix and ventral hernia require detail and painstaking work, to adjust to normal conditions.

The importance to be attached to the making of the incision is still more to be emphasized in the correct closure of it. The three requisites of success must therefore combine, to firmly secure the wounded structures.

a. Accurate approximation and coaptation of homologous structures.

b. Retention of the opposed surfaces until firm union has occurred sufficiently strong to withstand intra-abdominal pressure.

c. Aseptic suture material.

In fulfilling the requirements for efficient suturing of the wound, that suture is the best that is non-absorbent and will not act as a capillary drain. For this purpose Bantock's silkworm-gut stands unrivalled. Metal wire or silk offer no advantage over the silkworm-gut, but possess several disadvantages. Silkworm-gut may become buried at the end of three weeks or cut the tissues, if tied too tightly. If the ends are kept long, the first of these drawbacks is easily averted.

It may not here be amiss to give in detail the method of suturing of the abdominal wall as practised now many months by Dr. Florence N. Ward and myself in the Homœopathic Sanitarium of San Fran-

cisco. Irrespective of the fascia, a common layer of sutures, firmly holding all tissues, becomes essential. Suturing the separate layers devascularizes the lines of union, and the tissues later on are more easily stretched, because of less firm adhesion.

Before the insertion of the sutures, a gauze pad is laid between the wound and the intestines, keeping them out of the way and absorbing any blood that escapes through the punctures. The needle is inserted into the skin a half inch from the edge of the incision on one side, through the areolar tissue, on to the fibrous covering overlying the muscle and deeply into the muscle itself.

Finally, it hooks up the deep fascia and pierces the peritoneum. The needle is carried through on the opposite side in the same way, but in reverse order. No application of sutures to the peritoneum is required, as it falls together perfectly by the general approximation. All attention now centres upon the deep fascia. It is here the utmost nicety of adhesion is required to fulfil the expectations in firmness of adherent tissues.

Years of earnest proving of various methods leads me to give the utmost reliance on the corset suture, as devised by Andrew F. Currier, of Boston. It is a continuous suture, a modification of the buried suture, and offers the advantages of perfect approximation of the deep fascia. It permits, by long retention, the supporting value of permanently buried suture. A new stitch should be placed every 7 ctm. Long sutures can be placed, but great difficulty may be experienced in their removal, and as the long strands offer no advantages over the shorter, the latter should be preferred.

A strand of coarse silkworm-gut, as long as can be obtained, is mounted by a medium Martin needle at each end. "Both needles are introduced into the abdomen, just beyond the upper angle of the wound, about a half-inch apart, from without inward. The sides of the wound are then brought into apposition by successive stitches of continuous suture, including peritoneum, fascia, and muscles, from below upward and then from above downward, changing the needle to the opposite side with each successive stitch, precisely as one would lace a shoe. If two sutures are to be used, *i.e.*, one for each half of the wound, the ends of each must penetrate all the tissues, including the skin, and emerge near the middle point of the wound."

Following the tying of the through-and-through sutures, the use of superficial catgut unites the cutaneous margins wherever necessary. It is well to avoid undue traction on the stitches, and to protect the skin at the beginning and end of each suture by a few strands of kangaroo tendon or strip of gauze placed under each loop.

Over all, after careful cleansing, is poured iodoform collodion, which hermetically seals the wound. In ten days the collodion, superficial sutures, and mass sutures are removed, and fresh dressings applied. If the case has progressed on normal lines and the deep sutures are causing no trouble, they are allowed to remain at least two weeks longer.

Sutures should not be removed too early. I have learned to regard too early removal of sutures, even in aseptic cases, as suggestive of future weakness in the line of union. The good arising from employment of buried sutures must, it seems to me, chiefly be because of their retention for several weeks. The uniting medium is not strong at the end of a fortnight, the young tissue is easily stretched with permanent weakness to follow.

At or about the end of four weeks they are no further needed, and may be removed by cutting each loop and making gentle traction at the initial points. If care be exercised, there is no difficulty in the removal of this corset suture. When the ends become buried, over which the skin has healed, it then becomes annoying to find the strand, but a little patience soon sets all aright. After their removal a broad strip of adhesive plaster should supplement the abdominal bandage and further support for a time. No pad or other than uniform pressure should be allowed over the line of union subsequent to the operation.

The theory of laying aside the abdominal bandage, and, as soon as practical after healing is secured, of giving exercise to the muscles rather than fixation in a state of almost complete rest, appeals to the surgical mind as thoroughly logical. A bandage worn for several months will not add to the strength of the abdominal wall. but will tend rather to atrophy and coexisting weakness.

The central thought during the operation in these post-operative cases lies in avoiding the gut when making the incision. It is well usually to open the peritoneal cavity at once through section, slightly remote from the original line, on the side presenting the least protrusion, or else working above or below the former cicatrix. Once within the cœlom, the finger serves as the infallible guide to further work.

The retracted tissues can now be easily found, dissected out, superfluous peritoneum, fat, attenuated connective tissue, and superfluity of skin removed, fitted for the apposition of homologous tissues, especially of the non-yielding fascia.

Now, as the suture material is a pre-requisite to success, it follows that the preparation thereof becomes of infinite importance. The preparation of the silkworm-gut is made efficient by boiling the sutures in glycerine, according to the manner and with an apparatus that I first saw used by Jacobs in Brussels. Although catgut has a limited use in the method of repair just detailed, still the absolute purity of even the few strands used is of prime importance.

I shall therefore venture in brief on the hackneyed theme of its preparation. German catgut is obtained through Moritz Boehme, in Berlin. Its preparation is begun by standing for three days in benzine, after which time it is placed in ether, and remains until the ether has evaporated. Certain bottles containing reels that are to receive the gut are now boiled for one-half hour in soda solution. They are then filled with alcohol, which is in turn made sterile by boiling for fifteen minutes in a water bath.

The hands are now made sterile, fully as much care taken as in preparation for a capital operation, by long scrubbing in hot sterile water, then thoroughly treated with the chloride of lime and carbonate of soda mixture. Now the catgut is taken from the bottles with sterile forceps, and by sterile hands wound on reels which are again placed in their bottles. Five drops of sterile Price's glycerine per ounce of alcohol are now added to each bottle to slightly soften the catgut. The bottles then receive sterile absorbent cotton as stoppers.

The bottles are next stood in a cold-water bath, which is carefully raised only to the boiling-point. Inasmuch as alcohol boils at a much lower temperature than does water, it has boiled about a quarter of an hour by the time water reaches 212° F. Catgut prepared with details as here presented may be used fearlessly without the slightest subsequent trouble. It must not be forgotten that sterile catgut may become unsterile by improper handling in its preparation or during an operation; also that unnecessarily large catgut will form a knot that will act later as a foreign body.

Let me say, in conclusion, that I have never seen post-operative hernia develop where primary repair followed the proper approximation of divided tissue through the aid of the corset suture and sterile catgut. Buried permanent suture accomplishes no more than the corset suture of which I have spoken, and carries with it no danger of giving subsequent trouble because of inefficient encapsulation or septic changes about it.

I have found, in the course of time, that the aseptic burial of sutures and the primary union of a wound fails to always end the matter. It does not remain as innocuous and as an encapsulated foreign body in the tissues, but often with or without extraneous help finds its way to the surface, or else produces consciousness of its presence by some persistent sensation in the wound.

Here I wish to appeal for delay in removal of this corset suture, even after aseptic operations, as suggestive of future weakness in the line of union. The good arising from the employment of buried sutures must, it seems to me, chiefly be because of their retention for several weeks. The uniting medium is not strong at the end of a fortnight, the young tissue is easily stretched, with permanent separation of its fibres and weakness to follow. To those on whose personal efforts depends their livelihood, a long post-operative rest is especially necessary.

If, at the end of six weeks, the organic union of tissue is not sufficiently strong to be self-supporting, no suture, no abdominal supporter, no device of any character whatever, will prevent enteroptosis in the line of union and the formation of a hernial aperture.

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Discussion.

Charles Woodhull Eaton, M.D., Des Moines, Ia.: The points called up before me by Dr. Ward's suggestive paper may be briefly summarized as follows:

1. Post-operative hernia can be adequately treated only by operation, which implies a second abdominal section, practically reproducing the original wound condition.

2. Therefore the treatment of post-operative hernia becomes at once identical with its prevention, its only satisfactory treatment being another laparotomy, done this time with such technique as shall prevent a repetition of the hernia which followed the first operation.

3. Leaving out of consideration such matters as the location of the incision, its length, etc., as being the least bit aside from the focus of this discussion, we come straight upon the proposition that the possibility of hernia becomes remote just in proportion as the union of the wound is non-suppurative and immediate. Immediate union is desired, not because it is speedy, but because the resultant scar-tissue is both less in quantity and better in quality.

4. There are three great factors favoring immediate union. The first of these is exact coaptation. There are some who shove the edges of a wound together as indifferently as they would bring together the ends of two fence boards on a post. There are others who approximate with all the exactness of a maker of mosaic. With these tissues, whose structure is of microscopic fineness, no nicety can be too great. The second factor is the rigid exclusion of all suture material from between the approximated surfaces. Rows of buried sutures coapting the various layers are a delusion and a snare. Even absolutely sterile catgut is, strictly speaking, a foreign body, though in minor degree. The third factor is thorough-going asepsis. This means more than a de-

cently prepared ligature. Too often have the ligatures been drawn through the rubber top of the container, by unprepared hands, and threaded on a needle taken directly from the pocket case, the operator meanwhile being attired in his unprotected street suit, after which he has gone his way flattering himself that he has employed modern aseptic methods. Real asepsis means sterilized gown and hands for the operator; sterilized field of operation; sterilized instruments, ligatures, and dressings, and sterilized assistants who have an adequate knowledge of the practice of bacteriological sterilization. I cannot think this recapitulation out of place, or this reiterated emphasis unnecessary, so long as we continue to see men take a sterilized needle and sterilized ligature in sterilized hands, and then proceed to wet the silk in the mouth or flatten the catgut between the teeth to facilitate threading.

While consideration of the details of asepticism cannot be here indulged, yet regarding the one item of catgut it should be remarked that (a) it is a mistake for an individual to attempt himself its sterilization; this should be accomplished under those elaborate safeguards and appliances which go with the precision of a bacteriological laboratory; and (b) the cumol method is now clearly in the lead as being the most reliable and efficient. There are practically just three houses manufacturing aseptic ligatures,* surgical supply-houses merely having their labels put on the goods made by one of these three great concerns. One of the three has already adopted the cumol method; as to the other two, I am uninformed.

Finally, Dr. Ward's felicitous setting out of how drainage precludes immediate union in the area occupied by the drain, and necessitates repair by granulation in this part of the wound with its resultant inferior tissue, has shown the drainage question to be a major factor in the consideration of post-operative hernia. Must we drain, or may we have immediate closure, is a question which has recently received an unusual and interesting answer at the hands of Dr. J. G. Clark, of Johns Hopkins Hospital.† He points out how the well-known powers of absorption which belong to the peritoneum are lodged in its diaphragmatic portion, beneath which are "open spaces from 4 to 6 mm. in diameter, occurring in groups of fifty to sixty, which communicate with the lymph-vessels." It is further shown that there is an intra-peritoneal current, a sort of an abdominal circulation, which carries contained fluids and solid particles toward the diaphragm; and that, while this peritoneal gulf stream persists, no matter in what position the body may be placed, yet it is influenced to a marked degree by gravitation. He accordingly introduces 500 to 1,000 c.c. of normal salt solution into the abdomen, immediately before closing the wound, that an artificial current may be started at once and supplement the normal current. As soon as the patient reaches the bed its foot is

* Johnson & Johnson; Seabury & Johnson; J. Elwood Lee Co.

† Bulletin of Johns Hopkins Hospital, April, 1897. The Johns Hopkins Hospital Reports, Vol. VII.

elevated twenty degrees, and kept in this position for a period of from twenty-four to thirty-six hours. Dr. Clark further says that, from an investigation of drainage "based upon the bacteriological study of a large number of cases, and upon the clinical record of 1,700 cases of abdominal section performed in the gynecological department of the Johns Hopkins Hospital, I have been forced, notwithstanding my preconceived ideas in favor of drainage, to draw conclusions against it and to coincide with those few writers who discard it altogether." These novel propositions have already behind them an extensive experience and, if finally verified, will eliminate one source of hernia by doing away with the presence of a drain. In a single word, all measures and expedients belonging to the prevention or treatment of post-operative hernia are precisely those which tend to repair by immediate union."

George F. Shears, M.D., Chicago, Ill.: I have but a few words to say. The paper is so complete in itself, and so carefully written, that it needs but little discussion. I am very glad that emphasis has been placed on the fact that permanent sutures are undesirable. Early in the discussion someone spoke of the use of silk sutures in hernia; I have had a wide experience in buried sutures, of silk, silkworm-gut, and silver, and that experience has been unfavorable. I believe there is no place for a buried suture of silk, silkworm-gut, or silver, in the treatment of hernia. No matter how nicely the wound is closed or how well it heals; no matter if there be lack of increased temperature or absence of pus, it has been my experience that if a buried suture is left in the abdominal walls outside of the peritoneum, sooner or later there will be trouble; it may be in six months or it may be longer, but it will come. Therefore, I believe these ligatures should not be used in the radical treatment of hernia, or the repair of post-operative hernia. We have an aseptible and absorbable suture in kangaroo tendon, and I have never had a bad result from its use. I have used catgut extensively, and I want to say that I am not at all afraid to use it. More trouble arises from its improper use than from the catgut itself. If you close the abdomen layer by layer, unless you use great care you are apt to leave blind spaces between the layers, in which serum or blood collects and forms an excellent culture for germ infection. These tissues should be placed in exact contact, and all blind spaces obliterated. I have used formaldehyde and pyoktannin gut, and that prepared by the Jeffersonian method, and with good results. Some of my best results have been with catgut of my own preparation. There is no reason why one cannot prepare his own catgut. I have had the best results since I have been preparing my own catgut, and have given up pulling it through a rubber disc, which may or may not be aseptic.

W. S. Briggs, M.D., St. Paul, Minn.: Like Dr. Shears, I have had fairly good results from catgut of my own preparation, but, with most of the surgeons in our section, I am using catgut prepared by heat

alone. It is put up in twenty- or forty-inch lengths, rolled in small coils, sealed in a paraffine paper, this enclosed in another paraffine paper, and the whole enclosed in a sealed envelope. This is subjected for four hours to two hundred and eighty degrees of heat. I have had trouble in only two cases while using this gut, and then attributed it to other causes. This is the Boeckmann catgut. It is easy to carry and perfectly sterile, and you do not have to expose any more than you need. It is to be opened by an assistant with sterilized hands. While not hardened, it will last as long as any ordinary gut.

W. A. Forster, M.D., Kansas City, Mo.: As the doctor has referred to the causation of post-operative hernia, there is a point I should like to refer to, and that is the manner of making the incision. Now I have done several laparotomies in my time. Sometimes I have gone through the linea alba, and at other times I have not. Sometimes I have cut clear through at once. Then I have tried cutting through the skin, and completing the job with the scissors. Lately I have split the muscle instead of cutting it, and I believe it is a great factor in preventing hernia. In closing the wound I have done it in three ways. At college we were told that we would get such perfect adhesion of the peritoneum; we were told to fold it into the wound, and it would heal rapidly. It will do this, but it will absorb just as easy. Now I allow it to retract, if it wants to, rather than have it get into the wound. I use a continuous suture, through and through, either of silk or silkworm-gut. I do not use catgut, but whip through and through with silk, and tie and cut. But you will see some bellies which have such an unusual amount of fat that you cannot get the aponeurosis close enough together to heal well. In these cases, and in the post-operative cases, it is necessary to use buried sutures, and for this purpose I use the aseptically prepared and hardened catgut. I do not like the corset suture as well as the Edebohls suture, but for nice work I should not use either, as they leave dead spaces, which lead to suppuration and prevent nice union. Edebohls does not sew through all the tissues, but takes up each layer separately with a continuous catgut suture. I consider hernia the bête noir of laparotomists.

W. E. Green, M.D., Little Rock, Ark.: Recently I made a series of twenty abdominal sections, and closed the wound layer by layer with catgut sutures. The peritoneum was united with No. 2 catgut; the muscle was brought together with the same ligature, then the fascia was closed with kangaroo tendon; finally the skin with No. 1 catgut, introducing the needle very close to the edge of the wound, so as to not invert the edges. It was not a painful method, and the scar was a thing of beauty. After twenty operations, I found I had suppuration in five out of the twenty cases. Before that I had pus only occasionally. I tried to place the blame on various causes, and it annoyed me a great deal. It finally struck me that the method was the cause of all the trouble. In closing the wound by layers, dead spaces were left, serum

collected therein and infection followed. It is impossible to operate under any circumstances with perfect asepsis where a dead space is left and there is an accumulation of serum; infection occurs, and suppuration is likely to follow. I have since abandoned the method.

I do not like through and through sutures, as they cut the integument and cause a great deal of pain, and frequently leave ugly scars, yet it is necessary to use sutures that will bunch the tissue, and obliterate the dead spaces; therefore, I use through and through sutures, but do not include the skin. These are of No. 3 catgut, and are passed first; the peritoneum is then closed with a continuous suture of No. 2 catgut, the fascia with kangaroo tendon. The through and through sutures are then tied, and cut short, after which the skin is closed over them with a fine catgut. This absorbs in four or five days. This method has not failed me. It does not produce stitch abscesses or scars, and it is to my mind an ideal way of closing the abdomen.

JOSEPH C. FAHNSTOCK, M.D., Piqua, Ohio: I am glad to hear Dr. Green emphasize the necessity of closing the abdomen in a humane manner. If we ourselves could experience the difference between "through and through" and subcutaneous stitching, I know which we would prefer. I believe I am the first man to close the abdomen without the use of a knot, with the subcutaneous suture. I close every abdomen with catgut all the way through. I use the gut prepared by VanHorn of New York, and have found it thoroughly reliable. I close the peritoneum, then the fascia, being careful to leave no dead spaces. In a number of cases I have used the blunt hook in the external angles of the wound in order to put it on the stretch. The needle is brought just to, but not through the skin; the wound is closed so perfectly that there are no dead spaces. The last stitch is put through a perforated shot, and the shot closed with an ordinary forcep. I then seal the wound with iodoform collodion. I use no anodyne but the indicated remedy, and the patient suffers but little pain. This is a most humane manner of closing the abdomen.

DR. WARD: I thank you for the kind words expressed about the paper, and am pleased to find that some of the suggestions made therein have already been adopted. I lay no claim to originality in the method described of closing the abdomen, but merely wish to call attention to, and emphasize it. Pain is to be avoided, as it is frequently what we operate to cure, but I should hardly give up the knot simply because it causes pain. If the knot causes undue pain, turn it to one side of the wound, and it will cause no more pain than a shot over the cutaneous nerves. The through and through sutures are essential in avoiding the dead spaces; where the sutures are placed in layers, dead spaces are a direct result. Everything will depend upon the preparation of your material, and the more I practise abdominal surgery, the more I see that it is not this or that method of preparing catgut, but the preparation of the hands becomes the all-important essential. Four years

ago I heard the members at the Denver session talking of repeated cases of abdominal surgery without a drop of pus; I wondered at it, and asked how they prepared their catgut. I was in search of the secret, and went through all the usual methods, studied through the European hospitals at Berlin, Heidelberg, Leipsic, Munich and Paris, and came home, and still had pus occasionally in the wounds. I could not get the results they claimed. I have seen wounds closed according to the plan advised by Dr. Green by Olshausen in Berlin, and have seen the same wound in six days laid open on account of pus. I believe the secret is in preparation of the hands. In the preparation of the hands I have had no uniform success until I adopted the method referred to, and I have not seen a drop of pus for nine months—no wound of any kind with pus or stitch-hole abscess. I said four years ago that I did not doubt the veracity of the gentlemen, but I wondered at their success. As to the methods of making the incision, I cannot conceive of a man who desires union by first intention as using in dissection a blunt instrument. I cannot see how scissors can be used without lacerating the muscle fibres. With the use of the blunt handle of an instrument I could get good primary union. I brought some catgut from Europe with me; I was informed that it was the ideal. It was prepared in the vapor of alcohol and retained in bouillon, and the moment the bouillon became clouded it showed infection. This did not give the desired protection; I still had pus, so I discarded it for the method I have detailed. VanHorn's gut is certainly fine, and very convenient to carry; I see no reason to condemn it in any way. With these few remarks, let me close by saying that, no matter how you prepare your catgut, or how well you may prepare your hands, any inconsistency of detail will lead to imperfect results.

Physical Measures and Mechanical Means in the Treatment of Hernia.

By C. E. Sawyer, M.D., Marion, O.

There was a time in the history of medicine when it was all-sufficient that doctors be conversant with drugs alone, and, until quite recently, their entire province was limited to a knowledge of medical and surgical means of treatment, physical measures and mechanical means being but slightly considered.

To-day, professional requirements are markedly different. Circumstances and conditions evolved by medical progress have forced the necessity of a better understanding of all factors affecting disease. In consequence, there is demanded of the modern physician much greater general resource than ever before. So marked has been the change that all of the tendencies of the times are at present directed toward the prevention and removal of all causes productive of ill. This fact is evidenced in sanitary science, which, through its promoters and boards of health, has done so much toward stopping the spread of acute and contagious diseases. Likewise, microscopical research has aided in anticipating and thus preventing many of the disturbances that have heretofore created such havoc. Aseptic surgery is another crowning effort in the same direction, precluding, as it does, the many serious complications which have heretofore arisen in surgical cases.

Among the latest acquisitions to methods for improving health and preventing disease are physical measures and mechanical means.

So wide-spread is the demand for a practical understanding of physical measures that there is not at present one first-class literary college in the country but that has a special department for instructions in the principles of physical culture; yet, with all this, there are but few physicians who fully realize the extent of their power and their real import in medical practice. The general effects are acknowledged by all, but the special medical effects are not yet well understood. To help as best we may in advancing the subject, and to demonstrate the true value of physical measures and mechanical means, we shall endeavor to show their utility in the treatment of hernia.

For the purpose of abridgment, the subject will be presented separately. The argument in favor of physical measures being based upon the following propositions: First. The existence of hernia, no matter where located, is positive evidence of a lack of normal nutrition. Second. Nutritive functions are improved by properly regulated muscular exercises. Third. Corrective positions of the body are necessary both in the temporary relief and permanent cure of hernia.

Proof of the first proposition would seem to be self-evident, for if there was no relaxation of the hernial rings there would be no hernia, and were it not for some interference in the developmental processes by which they are kept in normal anatomical relation, there would be no relaxation. It is only when the rings become weakened that hernial protrusion is possible, for just so long as the muscles and tendons forming the boundary of the rings have the proper reactive and resistive force, hernia never occurs.

Thus, we recognize as one of the predisposing causes of hernia localized mal-nutrition; therefore, our first attention in the treatment of the trouble from a physiological stand-point must necessarily be in the line of correcting this state of affairs. This brings us to our second proposition, viz., that nutritive functions are improved by muscular action properly regulated. It has already been conceded that the normal relaxation and contraction of muscular tissue is its greatest tonic, and as the boundaries of the rings are made up of muscular tissue, it is necessary to their strengthening that proper muscular exercise be instituted.

This end is accomplished by systematized movements either manual or mechanical, so given as to bring into play both the remote and immediate parts concerned. By this means the life-giving blood-current, laden with oxygen, is hurried into the parts, while the venous current, charged with its broken-down tissue, is hustled to the various outlets of elimination, resulting in the restoration of strength and vigor of all parts concerned. Inasmuch as they are so easily employed and are of such great value, constitutionally and locally, these exercises should never be overlooked as strengthening and fortifying adjuvants in the complete restoration of hernia, no matter what local lines of treatment are being employed, for they are just as applicable to the case following surgical operation as they are to the injection or mechanical form of treatment, and if they are properly used, many of the relapses that now only too frequently occur would be much less likely.

In the consideration of special movements in the treatment of hernia, our attention must necessarily be given to such as have a constitutional as well as a local effect, for if either are neglected the results would not be satisfactory. The various movements which have been proven by specialists to be useful in the cure of hernia are numerous, and many of them quite complicated, demanding special apparatus for their execution; but, as it is our object to afford a line of physical measures which may be used with advantage under the direction of every physician, we shall only enter into a detailed description of such. This brings us to our third proposition, viz., that corrective positions of the body are necessary both in the temporary relief and permanent cure of hernia.

As the chest and abdomen are so intimately related and each plays such an important part in the influences affecting hernia, it is necessary, in prescribing movements, to bring to bear combined forces which

will increase the suction force of the diaphragm, as well as improve the tonicity of the abdominal walls, for herein lies the secret of success. Among the chief movements to this end are the following:

Standing with the feet close together, grasp some object at arm's length above the head, relax the body as much as possible, and allow it to swing in a circle with the hips describing the widest part. This movement causes an alternate relaxation and contraction of all the muscles of the body, serving as a powerful aid to both the general and local circulation.

A corresponding effect is produced by resting upon the knees, the hands above the head; the body is then made to sway from side to side eight or ten times. These movements affect especially the space in the region of the diaphragm, and thereby increase its suction force.

Another favorable position is by sitting on the edge of a bench or low table with the feet on the floor, the hands above the head, the body being allowed to fall slowly backward and then as slowly forward. These movements not only increase abdominal capacity, but they bring into direct action the muscles through which the inguinal ring opens, and therefore are of great importance in bringing about favorable results.

To concentrate muscular force at the base of the abdomen and to affect the inguinal region directly, while sitting, one arm should be stretched upward to its fullest extent, while the other hand is fixed upon the hip, the body falling sidewise, in which position it remains momentarily, to again resume the correcting position. After three or four movements, the arms and hands are to be reversed in their position and the same movements executed. This movement affects directly the tendons in the region of the hernia, and is one of the first rank so far as usefulness is concerned.

With both hands upon the hips this movement may be converted into another very favorable one by causing the head to describe a circle. This is especially effectual in changing the relation of the coverings of a hernial sac, because it changes the position of the omentum and the peritoneum.

To strengthen the tissues at the base of the abdomen and to aid in changing the relation of the contents of the pelvis, place the patient on his back upon a low table, by which the trunk is supported to the hips, while the legs are allowed to extend beyond. With the hands firmly clasped above the head, the feet are raised slowly to above the level of the body and then allowed to return to the floor, repeating the act four or five times. This position relieves the body of the force of gravitation, and therefore increases the suction force toward the chest by which the abdominal viscera are carried upward.

Another movement which has a similar effect is as follows: Lying on the back on a suitable couch, the feet are drawn up so that the heels touch the lower end of the trunk; the trunk is then raised so that the thigh and trunk are in a straight line. The hips now being the highest, the abdominal mass is shifted toward the head; by this sudden

elevation the chest-walls are broadened and elevated, the diaphragm acting as an immense pump to draw the contents of the abdomen upward.

It will be noted that by this movement all of the pelvic viscera, as well as the abdominal ones, change their relation. By this means alone many an otherwise obstinately engaged hernia may be freed, a fact which should never be forgotten in attempting the reduction of hernia. To know exactly what change or alteration takes place in the parts in this movement, it is only necessary to watch the abdominal contents while the patient is in the Trendelenburg position with the abdomen open, when it will be seen that all of the abdominal organs at once migrate toward the chest, thereby aiding very materially in the reduction of any hernial complication which may exist.

The Trendelenburg position is the one in which all patients should be placed while doing taxis, for it affords the advantage of gravitation as against normal downward pressure, and brings to bear the suction force produced by the diaphragm being carried upward. Thus it will be seen that physical measures are applicable not only in overcoming the predisposing causes to hernia, but as well in the relief of that most serious complication—strangulation. To illustrate their efficiency in the treatment of strangulated hernia, the following cases are cited. Many illustrations might be given, but the limitations of time prevent.

A few months ago there came under my observation a baggageman who had brought about a strangulated hernia by lifting a heavy load. He was sent to me after taxis, with the patient lying on his back, had been thoroughly tried, under an anæsthetic, without relief. As the emergency of the case seemed to demand immediate surgical interference, I had him hurriedly prepared for an operation, but before beginning the anæsthetic he was placed in the Trendelenburg position, with his hands clasped above his head, being directed to take a few full, deep inspirations; with a very little aid in the line of replacement of the prolapsed gut, all of the grave symptoms subsided and the patient was soon able to return home, all unfavorable appearances having disappeared.

By the adjustment of a proper truss and the employment of the physical measures heretofore given, this case has to all appearances been wholly restored, for there has been no recurrence of his trouble for several weeks. Coughing, standing, or lifting do not bring about even the slightest appearance of the former trouble, although his truss is off and all of the conditions are favorable to its reappearance; a conclusion of positive cure would seem to be justified, as for years before the parts were always slipping down upon the slightest effort, even though guarded by a strong spring truss.

Not long since, I was called to a case presenting all of the appearances of intestinal obstruction. Having operated upon the same patient a year or so ago for the removal of the appendix, I was sure she had some adhesive bands which might readily engage a fold of the intestine, thereby inducing a concealed hernia, and my diagnosis was

made in accordance with this knowledge. Having tried all ordinary means for the relief of the grave symptoms, I was about to again open the abdomen, when, to my surprise, by placing her in the Trendelenburg position, the symptoms quickly abated, and the bowels, which had been obstinately constipated, acted spontaneously within a few hours, and the patient was soon convalescent.

About one year ago a young farmer arranged for me to do an injection treatment for hernia. A day or two after his first visit, and prior to the date fixed for the operation, he returned with all of the symptoms of strangulated hernia. He had a history of having been manipulated for some time for its relief by two or three local physicians without effect. The same plan was adopted in this case as in the foregoing ones. With but little difficulty the strangulated gut was soon returned to the abdomen. He was then furnished with a proper truss and carefully instructed in the physical measures above given, which he followed assiduously for several months, with the result of a permanent and complete cure.

Mechanical Means.—Thus far I have purposely refrained from reference to mechanical means in order that I might the better emphasize their importance. Ordinarily, the physician diagnoses a case of hernia and then turns the patient over to a truss-maker or a druggist for the fitting of an appliance; a practice entirely too common, and one of which too much cannot be said in condemnation. A hernia, no matter where located, is a constant menace to an individual's life, and as a large majority of these patients cannot or will not be operated upon, it is our duty as general practitioners to be able to afford, for their relief and security against danger, the best possible means. This is accomplished, in part, by the proper fitting of a truss.

The average stock truss to be found in the drug-shops of the country is about as suitable for the treatment of hernia as a butcher's knife is for an ophthalmologist's use. As well might we think of ordering teeth from a dentist without an impression having first been taken, as to expect good results from a truss, furnished by anyone who does not thoroughly understand the physiological conditions to be met and the mechanical principles necessary to meet them. A truss may be made to fit as accurately as an artificial limb, if but half the care is taken in the matter of its fitting. Why, then, should we submit our patients to the dangers of an ill-fitting appliance? No truss, no matter what its style or form, can be of service without careful measurements first having been taken and the apparatus carefully applied. Neither will any one shape of pad do for all kinds of hernia. Each case of rupture is a law unto itself, and should be treated as such.

It is not enough for physicians to say that a patient has a hernia and needs a truss, and then refer him to someone else to supply the appliance. He should personally supervise its fitting, for, unless properly adjusted, it is worse than useless. The object of a truss is to retain within the ring the abdominal contents, and if the pressure is not directly over the point of protrusion, its purposes are defeated.

Any truss that is so fitted as to retain the parts *in situ* is favorable. The one, in my experience, which serves this purpose best, is a cross-body, malleable steel, spring truss, such as is made by Chesterman & Streeter, of Philadelphia. It is so constructed that it can, by being heated, be moulded accurately to the body of the wearer, and thus made to fit perfectly. By means of the various pads which may be obtained, it is possible to hold in place any hernia that is at all retainable. In order that the apparatus may be made to fit accurately, the following plan, which is advised by Dr. De Garmo, of New York, is the one I employ. The language of the doctor so aptly describes the mode of procedure, that I give it here just as it is given to his post-graduate classes.

Take a strip of sheet lead half an inch wide and one-sixteenth of an inch thick by about twenty inches long; place this across the abdomen with one end resting over the internal ring (we will say of the right side); the lead is now molded over the front of the abdomen and carried around the left hip to the centre of the back or a little beyond. Having been shaped to the exact form of the body, it is now slipped off and placed edgewise on a sheet of paper of suitable size. Its inner surface is traced around by a lead-pencil, and the process is either repeated for the opposite side or the lead may simply be turned over, thereby completing a tracing of the entire form of the pelvis. Select the size and style of spring to be used, and, beginning with that portion which passes over the front of the abdomen, shape it to fit the tracing so that when it is applied to the body it will be found to conform to its contour perfectly. This method so simplifies perfect truss-fitting as to place it within the reach of every practitioner who is willing to devote the required time to the interest of his patients.

With a little care in this direction, and by the careful selection of a proper pad, most favorable results are attainable. The pad to be employed will be best chosen after actual trial. In most instances pad No. 1 will be sufficient, while in other cases any of the various pads here presented may be required. The rule governing the selection of pads is always to be the one which makes most pressure at the internal ring, for, if the protruding part is prevented from passing out through the internal ring, its calibre is kept from enlarging, and the physical measures before cited have much better curative prospects, for it is only where the parts are kept in normal position that any form of treatment can be successful.

With a good fitting truss, properly applied, the physician's duty is still only partially fulfilled. The subsequent care of the case is equally important. The truss is only an adjuvant, simply a part of the general programme; it does not or cannot within itself cure. It serves exactly the same purpose in the treatment of hernia that the brace or cast does in the treatment of spinal curvature: It holds the parts in place while the reparative processes of nature are bringing about the cure.

It is therefore incumbent upon us to keep every case of hernia

under observation often enough, to see that the truss is kept in position, and to know that the physical measures are being followed with persistency and regularity; for, without extraordinary vigilance in these matters, failure will be the consequence, while, on the other hand, if proper attention is given, the average case of hernia, no matter where located, will be permanently benefited.

Discussion.

D. M. Gibson, M.D., St. Louis, Mo.: There is a certain number of hernia cases which cannot be surgically treated; there are other cases where surgery is not advisable; there are still others where surgical treatment is apt to result fatally. Then there are cases which relapse after an operation, and here it is difficult to induce the patient to submit to a second operation. For this reason we must consider mechanical measures. Let us stop and see what is to be gained and what cases are unsuitable for operative treatment. Where there is a lack of reparative power, a breaking down of the support of the abdominal wall, I do not care what means you use, until you can get regeneration and physiological activity of the abdominal muscles, operative measures are bound to fail. By mechanical treatment, for the most part, is meant some form of support or truss, and there is no one question which shows such neglect or such a lack of intelligent action. Generally, the practitioner sends the patient to the instrument-maker and gives the matter no further consideration. If it seems to be a reasonably good fit it is all right, and no further attention is given to hygiene, getting the walls into good condition, or the possible undue pressure of the truss. We should see that the truss does not exert improper pressure or get out of place. You know how easy it is to keep the gut back with a little pressure; and if it can be properly applied by a truss there is, or need be, no punishment in wearing it. If, in addition, there should be used hygienic and physiological measures, there are reasonable chances for a cure. Many times post-operative relapses are caused by the manner in which the tissues have been cut, bruised, and then drawn together so they cannot be expected to hold. Many sufferers cannot spend the time and money necessary for an operation, and if we can by proper attention to mechanical means give them comfort and a reasonable amount of happiness in this life, it will amply repay us for all the time and trouble it requires.

J. H. McClelland, M.D., Pittsburg, Pa.: I should like to call attention to one point in this admirable paper in reference to the Trendelenburg position; the paper says that "very soon" the difficulty is corrected. I want to emphasize that statement with this addition, that there are few cases which cannot be entirely relieved by this position, *if persisted in*, accompanied with a certain amount of taxis. I remember one case where I left the patient in this position, intending

to come back in a short time and operate; when I returned I found that the hernia had receded entirely. I would urge the use of this position before trying other measures. You may place your patient on the table and leave him for a few hours, and then, returning, reduce the hernia easily when at first you had failed. The paper is very exhaustive.

C. B. KINYON, M.D., Ann Arbor, Mich.: The case to which I referred yesterday had been tried in this position for several days, and when they sent for me they said it was to operate. When I arrived everything had disappeared, but the patient was vomiting persistently, so I said there was something wrong or she would not vomit. On opening the abdominal cavity I found that the hernia had slipped back en masse, and the knuckle of gut, while not relieved, was still not in sufficiently bad condition to cause gangrene. We loosened it up, and the patient was relieved. Be sure everything is right before leaving the patient.

CHARLES WOODHULL EATON, M.D., Des Moines, Ia.: In company with Dr. Royal, I had an experience similar to that of Dr. Kinyon. There is yet another expedient which may be tried, and that is the emptying the contents of the strangulated knuckle by aspirating with the needle of a hypodermic syringe. This I learned from the senior Dr. Dickinson, of Des Moines, and it has helped me out in several cases. When the strangulation has existed for only a short time there is already a pouring out of clear, yellow serum into the intestine, and if you will take an ordinary hypodermic and draw off the serum and gas you may be able to reduce the hernia. Some have objected that this plan is liable to allow escape of the intestinal contents through the needle puncture into the abdominal cavity. I am inclined to regard this objection as purely theoretical rather than practical, because the man who told me of the plan said he had never had any trouble of that kind, and, between his practice and mine, it has been used ten or twelve times in cases where it permitted the reduction of hernias otherwise not reducible. We have had no bad results in any case.

F. W. GREINER, M.D., Two Rivers, Wis.: I have found the use of hot fomentations excellent in relieving tension here, so as to allow the hernia in many cases to slip back without much trouble; the great majority may be thus relieved. Many cases which seem obstinate may be reduced by the use of the Trendelenburg position and hot fomentations.

C. T. HOOD, M.D., Chicago, Ill.: The most valuable point of the paper has not been properly discussed. While not doing much work along this line, yet I do some and see much of muscular development, and the descriptions and illustrations are the best I have ever heard or seen. Those who have not watched the results of muscular atrophy

and muscular development are much surprised at what may be done toward overcoming the apparently impossible. I have seen several cases of hernia entirely and perfectly cured by muscular movements and physical culture. I hope the doctor will have cuts made of his illustrations; they will make a valuable addition to the library of any physician or surgeon. The matter of taxis and the fitting of trusses cannot be too strongly emphasized. Too many cases are turned over to the instrument-maker and nothing more thought of them. Some years ago I was called into the country to see a neurological case, and the doctor showed me an appliance made by him for hernia. The patient was placed in the Trendelenburg position and a plaster-cast was taken. From this, having had some experience in dental work, he made and vulcanized a perfectly fitting truss. It was a new idea to me, and one well worth consideration.

H. F. Biggar, M.D., Cleveland, O.: This is a very important subject. I am delighted with the paper and pleased to know of the good work which is being done by Dr. Sawyer on the line of conservative surgery. Do not think that the reduction of a hernia as described by the doctor is as easy as it is described. It may be all that is necessary in the uncomplicated cases where the hernia is reducible, but if there is a knuckle of gut not relieved, the operation is the only course to follow. Even in cases operated upon where the knuckle was not relieved, the post-mortem showed that the knuckle had not been touched at all. Do not expect a cure after reduction with or without an operation unless the knuckle is relieved. If vomiting continues and the pulse feeble and thready, there is danger. After reducing a hernia, you are never sure of results until there has been a good movement of the bowels, and, better still, if it comes from beyond the point of trouble. This method as advised by Dr. Sawyer is all right if there are no adhesions or knuckles. In an acute case there is not so apt to be adhesions unless it is strangulated; then adhesions may be extensive, and safety lies only in an operation. When you have exposed the bowel, pull it well out and satisfy yourself that there are no adhesions or knuckles overlooked; then replace. I think the suggestions in the paper are good, and the mechanical devices mentioned of great value. As the doctor has said, where this trouble arises from disease conditions, you must restore the system and build up the general constitution as well as the local conditions. Where the hernia is strangulated but not adherent, I have found it beneficial to apply oil of lobelia, which has a very relaxing effect.

Dr. Sawyer: This paper was written strictly from the standpoint of mechanical measures as employed in the treatment of hernia and especially to emphasize the consideration due them by the general practitioner, for many cases which otherwise promise but little are often cured by physical measures and mechanical means. As to the persistent use of the Trendelenburg position referred to by

Dr. McClelland, I am glad that it came up, for I am sure it is a suggestion that will prove beneficial in the treatment of strangulated hernia. In the case mentioned by Dr. Kinyon, it was, as I believe, one of the cases which was relieved by the position assumed while on the operating table. The aspiration idea is an excellent one. It surely reduces the size of the gut, and I can understand how it would materially aid in the replacement of a strangulated or incarcerated hernia. As to hot fomentations where there is any tendency to inflammation, my experience has taught me that cold is better than heat; cold constantly applied by means of an ice-bag. The method of fitting trusses as mentioned by Dr. Hood I consider a very practical one. If a cast can be made of the jaws for teeth, and of the leg and arm for an artificial limb, I believe it may serve a favorable purpose in the fitting of trusses; for it is certain that upon the accuracy with which the contour of the body is fitted and the manner in which the pressure is applied depends the success of any truss. Dr. Biggar has brought out some very important points in the matter of thoroughness in diagnosis. Thoughtfulness in the means employed, and persistency in the lines adopted, are prime factors in the results attainable.

The Treatment of Large Scrotal Hernia by the Implantation of Silver Wire or Silkworm-gut Mats.

By J. L. Hanchett, M.D., Sioux City, Ia.

Knowing that it is generally conceded that voluminous scrotal hernia is incurable, the writer has made a series of experiments upon dogs, to ascertain the tolerance of foreign matter implanted in living tissue. The principle involved is repair by adventitious tissue caused by the encysting of foreign matter. The injection method of cure rests solely on the plastic exudation thrown out from the irritating fluid used, the exudate later becoming fibrous. In many cases where the injection is used for the cure of hernia, we know it is often controlled only so long as the adventitious tissue is produced by the injections. So the conclusion is reached that if the foreign material is made a constant, the cure will be continuous and permanent.

The kangaroo tendon, lasting for a longer time than catgut, causes an irritation and exudation more pronounced, thus producing stronger union by blocking the canal longer and favoring fibrous adventitious tissue.

The cases tabulated by W. B. Coley in his article on the disadvantages of non-absorbable sutures in the radical cure of hernia, nearly all show the relapse occurred some considerable time after the silk or wire sutures were removed, the encysting of the sutures having failed.

Coley collected sixteen cases where sinus resulted from the non-absorbable sutures having been used. The operations had been done by the leading surgeons of New York City. Of these sixteen cases, fourteen recurrences of the hernia followed the removal of sutures some little time afterward, two only recurring while sutures were still *in situ*.

Coley himself states he has used non-absorbable sutures in only three operations. Two of these required operative treatment for sutures. Relapse occurred subsequently in both.

Barring that small percentage of faulty diathetic patients whose very body is a most favorable culture medium, foreign materials can be buried in tissue with impunity, as witness the tolerance of bullets in the bodies of old soldiers and hunters, and of needles in the bodies of children. Lead encysts in a very short time and is as safe as though carried in the breeches pocket, and needles have been known to wander aimlessly and harmlessly in the body, as the comet through the wastes of space. The needle fails to encyst because its point is ever being

thrust forward by muscular movement or pressure from without, and the probable reason why silver wire is often irritable is that the ends are often sharp and constantly traumatizing tissue. (It might be suggested that the ends be protected with shot.) From all data which we can gain in regard to foreign matter in the body, lead is, of all substances, best tolerated. The stimulating effect of lead, whatever that may mean, is the supposed reason for this tolerance. Silver is supposed to have a germicidal influence in the tissues, and is a substance exceedingly well tolerated. Glass is often left in the foot or hand for years without causing pain or inconvenience. Both aluminum, silver, and gold have all been planted within the body with success. Celluloid is also tolerated—often used in the face to promote cosmetic effects.

Abbey has recommended the inlaying of rubber tissue to prevent the re-union of the cut nerves in Hartley's operation for tic. The writer, on the 8th of last November, inlaid a piece of rubber tissue 3 ctm. square, covering the Gasserian ganglion, to prevent such a re-union. The rubber tissue has thus far caused no trouble whatsoever. Other things being equal, it would be judged reasonable to suppose that the lighter the material the better it would remain *in situ*. Gravitation alone would perhaps cause some stress on the tissues, producing disturbance. Experiments on dogs are hardly competent upon which to base a theory or draw a conclusion, and it is hoped some of the hospital surgeons may be interested in the matter, and trials of non-absorbent material be made in a series of cases to determine fully the worth of the plan in hernia work.

McBurney conceived that cicatricial tissue would be sufficient to "plug" a breach, so to speak, and left the external tissues in the wound unsutured, allowing closure to take place by slow granulation; but later, finding that the scar stretched and the internal barrier was not conserved by this pad of scar, he abandoned the method and acknowledged the weakness of the operation. As these large scrotal hernias are inoperable *because* of atrophied tissues, it seems eminently reasonable to hope for means of cure only by a plan that will rehabilitate the weak and wasted structures, and to revolutionize the process by *inducing adventitious* tissue.

I show you here some woven nets or mats, which I have planted between the peritoneum and the overlying structures in dogs. Some are of silver wire covered with lead, some bare silver, celluloid, silkworm-gut, waxed silk, and fuse-wire. I have also used fine particles of silver and lead implanted, to note the process of encysting. Too short a time has elapsed to finally decide the merits of these materials for encysting methods of closure, but suffice it to say there is a field for experiment, with the hope that in a proper technique, both of manual performance and the most rigid asepsis, a means may be found for the management and cure of this, the worst form of hernia—the one that almost incapacitates the victim, making life a burden, for, not only does it incapacitate, but the volume of tumor, so large as to show through

the clothing, practically ostracizes the patient from the haunts of society.

Whether filings or globules of foreign material peppered into the breach before suturing with kangaroo tendon or chromic gut will be sufficient to produce encystic tissue is an open question. If the peritoneum should be peeled away from the iliac walls after the sac has been ligated, the foreign material could be insinuated for some distance about the breach, and would cause the thickening of the whole region.

(A suggestion for those who use the injection method.)

Would it be possible to introduce fine particles of silver, lead, or graphite, through a good-sized needle or cannula, into liquid injections for smaller hernias, thus implanting a permanent agent, which would produce a constant irritation?

So far as I know, Professor A. M. Phelps, of New York, is the only operator who has recommended the introduction of considerable foreign material for the cure of voluminous hernia. His mattress method, which might also be termed the darning method, is to use large amounts of silver wire, sometimes introducing more than five feet, completely matting the parts. In the method of implanting mats or nets, the difference is in having the material ready before the operation, saving time in tying the sutures. The mat is placed on the peritoneum, under all the muscular tissues. The suturing with kangaroo or chromacized gut is the same as in the Bassini or Halstead method. This implantation method may be used in the repair of ventral hernia following abdominal operations.

A word in closing. It would seem desirable that the patient should never know that a fixed suture of non-absorbable material is buried in the body. The very fact of foreign substance to be carried always is a subject upon which the mind reverts often, and might be the cause of much unnecessary worriment.

Discussion.

William J. Harris, M.D., St. Louis, Mo. (owing to the sickness and absence of Dr. Harris, his remarks were read by Dr. C. J. Luyties, of St. Louis): The end sought to be attained is by putting a mechanical obstruction in the opening through which the hernia has taken place. As the author says, the injection method of cure aims to set up sufficient irritation and inflammation as will cause plastic matter to be thrown out and, for awhile, act as a support. The other question presented by the writer is whether the use of some non-absorbable substance is the better plan in those cases where the opening is large. The desideratum is, of course, to repair the opening and to permanently close it with tissue that is not cicatricial in its character and liable to be absorbed. When this is impossible, owing to the size of the hernial opening, the question of implanting some foreign substance may come up for consideration, and the matter of selection as

to what shall be used decided upon. Nothing but continued experiment can finally settle a question of this kind, first, as to whether one or the other of the various substances enumerated by the author is the most desirable, and second, time only can decide what permanent benefit is produced from the implantation of foreign substances as a means of repairing those old, large hernias for which the author recommends this special method of procedure. Any plan promising relief, and of a permanent character, from a condition which practically incapacitates the sufferer from any active avocation in life, is a matter that is worthy of our earnest attention and consideration.

M. DILLS, M.D., Carlisle, Ky.: As to the buried silver-wire suture in these cases, I believe I can lay claim to originality in its use. About eight years ago a colored porter in our town was caught by a strangulation of an old hernia, and, as his physician could not reduce it, I was called upon to operate. As the colored population were not bringing in much money I did not hesitate to try an experiment. I opened the ring, which was very large and patulous, introduced three silver-wire sutures, closed it up and twisted the sutures as best I could, closed the external wound with catgut. In ten days he was about, and in five days more he was back working as a porter. I did not report that case. A few years later I read an account of some French surgeon who had been using silver wire in these cases. Shortly after this I saw a case of strangulated hernia in a child, out in the country. I operated and inserted one silver wire on each side of the cord, and the child made a good recovery. About eighteen months ago I used the same plan on an old gentleman of over sixty years, and in these three cases the hernia has never reappeared, nor has there been any trouble from the buried sutures. I have used it three times in Louisville, and have had no trouble reported from the sutures or from any relapse in the two cases. I am now experimenting with a new method of curing hernia by cataphoresis. I have a number of cases under treatment, but not long enough to enable me to give positive results. In the silver wire I use the No. 10, twisting the ends to make them as smooth as possible.

DR. HANCHETT: I have nothing more to say, excepting that I shall be pleased to correspond with any of the members during the coming year on the subject of buried sutures in any location or in any case. It is a thing we should know more about if we had more cases like Dr. Dills's. I should like to have him use lead wire; he could twist it around the kangaroo tendon, so when the tendon is dissolved the lead would remain.

A Plea for the More Thorough Teaching of Anatomy.

By William Tod Helmuth, M.D., LL.D., New York City.

I have selected for the subject of this lecture one which is centuries old, but still remains of never failing interest, "The Relation of Anatomy to Medicine in General and to Surgery in Particular." It is an important kinship which must not be disregarded amid the multitude of newly born connections that have lately been given to scientific medicine. The position awarded to anatomy in the curricula of many of our medical colleges is entirely too insignificant, and is not commensurate with the great importance of the subject. A student during the first and second years of his college life attends the anatomical lectures of his university, works at his dissections, performs his cadaveric operations, is examined at the end of his second year, and practically has completed his anatomical studies. Anatomy is erased from his slate. From the arrangement of the curriculum no other course is left to him. The grand and glorious study must be cast aside in order that he may adequately prepare himself for examination in other newer and far less practical departments. Not being aware of the immense importance of the subject, the student is glad that so dry a study is "docked," and with a very superficial knowledge of it he is hurried on to so-called higher branches. At his senior year he is often actually ignorant of that elementary knowledge of anatomy that he acquired during his Freshman year. I know this to be a fact, not from hearsay, but from personal observation. The senior medical student of to-day can tell you the peculiarities of the staphylococcus pyogenes aureus, its coloring matter, its diameter, and its links, but has forgotten the branches of the common carotid and the course of the trigeminus. On certain occasions I have been so astonished at the deficiency of anatomical knowledge exhibited by advanced students, that in one or two instances pains have been taken to refer to college records to ascertain the standing in anatomy of those who appeared most deficient, and it has been discovered, that at the time of their examinations these students passed with creditable marks. There can be no other explanations of these facts than these: First, anatomy very soon grows rusty on account of the necessity of abstract memorizing for its acquirement, and second, the time allotted for the consideration of other subjects so completely fills the twenty-four hours, that even a perfunctory review of the first and second year's studies is absolutely impossible. This lack of anatomical acquirement has always been more noticeable to me as a teacher of surgery, because

in the course of my professional life I have frequently been made painfully aware, that surgery has been the most vulnerable point in the armor of the Homœopathists. This deficiency has been publicly and derisively flaunted in our faces; it has been introduced into legislative bodies as a proof of our incapacity to take equal place with the old school in the treatment of injuries and deformities, and it has been produced as an argument to show that the Homœopathists are not qualified to assume the charge of public hospitals or to receive appointments in the army and navy of our country. Watching, therefore, jealously the progress of the surgery of our own school, for nearly half a century—indeed since it was born—it may be understood why even now with proper recognition and respect dawning upon us, I deplore the slight offered to that study upon which intelligent surgery must ever rest, and upon which its practice absolutely depends. I recollect, somewhere, reading an address, delivered by Mr. Lawson Tate, in which he states that too much time is expended by the medical student upon anatomical study, and that though general knowledge on the subject is certainly useful, specific, or minute, anatomy is of no general utility. This was the opinion of the Methodists and of Paracelcus; but I cannot agree with it, indeed, I must widely differ therefrom. The more thorough the knowledge of anatomy, the more artistic and complete will be the work of the surgeon. Every operator knows this. Distinguished and experienced men when called upon to perform a new and difficult operation, if possible, go through its different steps upon the cadaver, and many conscientious men, who are not by reason of their environment enabled thus to refresh their memories and increase their manual dexterity, recommend their patient to those enjoying such facilities. Materia medica, especially homœopathic materia medica, cannot be scientifically understood without a knowledge of anatomy. When drugs are being proved it is of material import that the prover accurately locates the symptoms, not only as regards special regions, but of organs and special parts of the same organ; he should know through what nerve a pain courses, or in what muscles contraction or relaxation occurs, else he cannot scientifically record the results of his proving. How can one understand therapeutics, or obstetrics, or appreciate the physiological actions taking place in the interior of the body, or the appearances presented by disease, without a definite knowledge of the structure of the human economy? Anatomy, general and special, descriptive, regional, surgical, pathological, and comparative, thoroughly understood and intelligently applied, not only give, to the surgeon and the physician, confidence in the performance of his daily routine work, but stimulate to the accomplishment of great achievements in original research and the performance of magnificent operations. It is a significant fact that, with few exceptions, the best surgical artists of any age were all anatomical students; and *vice versa*, the painter and the sculptor, to rise to the highest perfections of their respective arts, must study the construction of the human body, and for the production of outline, expression, and post-

ure, must understand the contraction and the relaxation of muscles. This was considered so necessary, in the days when art was at the acme of its splendor, that the works on anatomy told on their title pages, that they were written for physicians, surgeons, and artists; indeed, so absolute was this acknowledgment, that Leonardo da Vinci, Michael Angelo, and Parrhasius were allowed to torture criminals, that they might portray in their pictures proper posture and expression. In the poem "Parrhasius," who is supposed to be depicting Prometheus, these words occur:

> "Now lead him to the rack
> Press down the poisoned links into his flesh
> And tear agape that healing wound afresh;"

and later, that artist in a rapture exclaims:

> "Gods if I could but paint a dying groan."

If, therefore, the study of anatomy is so important to the artist, who looks to the outside only and colors his canvas or sculptures his stone to delight the cultivated perceptions of the community and enhance his own glory; what should it be to the physician who studies it from more exalted motives and to attain higher results—the good of humanity, the protection and preservation of human life?

Anatomy is the rock upon which the whole superstructure of medicine is built; it should be so considered in the construction of every medical curriculum, and no second place awarded to it. If men are to be made practically scientific (if the expression may be employed), the branches that are most important in curing the sick should be given the most prominent places. Those additional ones, in which the microscope plays such an important part, as well as the intricacies of chemical science, are no doubt essential to the production of accomplished and learned physicians, but should never be given precedence over anatomy or any other of the essential branches. I am of opinion that, with the exception of urinalysis, the examination of milk, and the practical points of toxicology, most of the so-called laboratory work which is now considered so essential, and which occupies so much of the time of the medical student, is absolutely of no practical value to the general practitioner of medicine and surgery, and is forgotten five years after his graduation. Judging from my own experience and that of my friends, it seems to me, that it is rather more important that the medical men understand the use of the stomach-pump and the administration of antidotes, than to be versed in all the minute details of toxicology; that he should study the clinical features of tumor diagnosis, that he may be able to make a prognosis before the operation or the death of the patient; that he be made fully to appreciate the methods of asepsis without puzzling his brain as to the culture, shapes, and diameters of each colony of bacilli, because in these days of ultra-specialism, such knowledge is possessed by skilled men in ai-

most every city and town, who devote their entire time to and are possessed of appropriate apparatus for the unravelling of such mysteries, and whose peculiar mental bias leads them into the alluring fields of chemistry, microscopy, and toxicology. One other consideration must be regarded. Experience has taught us that the sciences of the microscope of one decade may not be those of the next. An atom of new substance dropped into an old compound, the elements of which were supposed to be well understood, may so alter its chemical composition that all previous knowledge concerning it may prove to be erroneous. I wish to be distinctly understood. I am not attempting to discourage the study of chemistry, microscopy, histology, or bacteriology, but I am making a direct and decided protest of giving undue prominence to subjects that are in the main of comparatively little use to the physician in curing the sick at the expense of those absolutely necessary studies, proficiency in which is essential, not only to the success and reputation of the physician, but to the welfare of humanity itself. Therefore, the careful and prolonged study of anatomy should be encouraged, not only because it is the foundation-stone of medicine, but because it stands, like the hills,

"Rock-ribbed and ancient as the sun."

Examine the history of medicine from its earliest development in India (?) through the Chaldean, Persian, Grecian, and Roman eras, lost in the dark ages to rise at the Renaissance and be continued to our own times, and the student finds but one constant state of mutation. The "humoral doctrine" of the Dogmatists, gave way before the "tripod" of the Empirics, it, in turn, was followed by the "fundamental communities" of the Methodists, which was altered by the decrees of the Eclectics, and so history repeats the sectarianism of therapeutics, down to our own times, when the medical philosophers are flattering themselves that all systems have disappeared. This is not by any means the case; a most tumultuous jargon of discordant elements exists to-day. The doctrines of Homœopathy, hydropathy, artificial aëro-therapeutics, balneology, medication with the animal extracts, the powers of electricity, hypnotism, massage, hygiene, are all striving for the mastery, and the old school therapeutics of 1898 is just as unstable as it was in the eightieth olympiad. O'er look the history of surgery, as it shone in the golden age of Greece, through the teachings of the Salernian, Alexandrian, and Italian schools, its brilliancy eclipsed in mediæval times only to arise in undeniable glory, which has steadily increased, until to-day it dazzles the world. Yet change is written on every phase of its progress. There is a new therapeutics inaugurated by new methods; there is a new materia medica always enlarging by the introduction of new drugs; a novel physiology as revealed by the microscope, and a more versatile chemistry, ever varying by the introduction of new laws and new elements. But the body of man stands to-day, the image of God, that was created

when the world came out of chaos, before symptoms or creeds were born. As it stood upright in the garden, so stands it to-day with the same framework of bones, the same number of muscles, the same anastomosis of vessels, the same ramifying nerves. No new ones have been added, none have been taken away—as it was made in the creation so it remains to-day—perfect in its shape, wonderful in its adaptation, beautiful in harmonious action, and unparalleled in the mystery of its mechanism. Well may the poet exclaim:

> Why what a piece of work is man
> How noble in reason how infinite in faculty,
> In form and feature how express and admirable—
> In action how like an angel,
> In aspiration how like a God!

and the anatomists, as they survey the constant and ever-varying changes in all the collateral branches of medical science, may exultantly cry aloud to their colleagues:

> "Tempora mutatur non nos mutamur."

To study and remember anatomy and its details, dissection is absolutely necessary. Practical work with the scalpel, under the supervision of accomplished and learned demonstrators, is the only method of acquiring a specific knowledge which will be of use to the surgeon, for by such method alone does the anatomy of regions become apparent, and the relation of one part to another appreciated. It is interesting to note, in casting a cursory glance backward over anatomical history, from the birth of surgical science to the earlier days of the century, that its professors in almost forgotten periods embraced every opportunity for dissection. It was in the Alexandrian school, founded by the Ptolemies three hundred years before Christ, that Herophilus made the first post-mortem examination. His name is familiar to every student when studying the anatomy of the skull.* This early anatomist with his compeer Erasistratus, overstepped the laws of humanity and disgraced the first principles of medicine, by opening the bodies of living criminals bequeathed to them by the Ptolemies with the hope of discovering anatomical secrets—certainly, therefore, they were the first vivisectionists. Even after Christianity had enlightened the world a criminal was handed over to the medical faculty of Pisa "To kill after its own fashion and to anatomize." Alcamon, in the sixth century, dissected the eyes and ears of animals, and thus discovered the optic nerve and the Eustachian tube. Celsus and the Physician of Pergamos (Galen?) made many dissections. It was the latter who first pointed out the platysma myoides, popliteus, the interossei, and other muscles, as well as demonstrating the ductus-arteriosus and the three arterial coats. Paul of Ægina, in the seventh century, after

* Herophilus also named the calamus scriptorius, the hyoid bone, the duodenum, and the prostate gland.

careful dissection, described the palmaris brevis and the olfactory nerve. But, in the general chaos and decline of all things, literary or scientific, during the Middle Ages, medicine and surgery were not exempt from the retrograde metamorphosis that overturned Western Europe. But from the ashes of desolation arose (A.D. 1000-12) the school of Salerno, and it became for several centuries the focus of the medical and surgical knowledge of the world, and during what is called its golden age here were educated many distinguished anatomists and surgeons. Dissections were again begun upon inferior animals, chiefly upon the pig, a work being published entitled "De Anatome Porci." In the thirteenth century dissections were ordered to be made of the human body once in five years. Then in the anatomical firmament appeared a shining light in the person of a man who loved his art to distraction, one to whom the name "restorer of anatomy" was given, who in 1316 published his "Anatomia" which was based upon his dissections of the human body, this being really the first work on the subject since the days of the Alexandrians. This man was Mondino of Bologna. It is a notable fact that in the preparation of this book he was materially assisted by a woman. To a pupil of this celebrated man, Guy du Chauliac (?), we are indebted in a great measure for the restoration of surgery—1352-78.

In 1443 a curious event occurred which gave fresh impetus to the already progressing sciences of anatomy and surgery. It was the discovery by Pope Nicholas V., in the Church of St. Ambrose in Milan, of a lost MS. of Celsus. This was a treasure indeed, because it unfolded the knowledge of Hippocrates and of the early Greek school, which, for the most part, had been forgotten in the general wreckage of the dark ages. This MS. was speedily printed and published; it necessarily had an immense circulation and exercised a material influence on the Renaissance. From the fourteenth century to the earlier part of the fifteenth, the anatomists and surgeons might stand thus: Ambrose Paré, famous for the introduction of the ligature; Peter Franco, the champion of supra-pubic lithotomy; Gaspar Taglicozzi, renowned for rhinoplastic operation, and Fabricus Hildanus, the wielder of the red-hot iron. Again the learning of the profession became proverbial, and the advice of the doctor and the offices of the surgeon were held in high repute. Linacre (?) then journeyed from England to Padua, which had become the seat of one of the greatest medical universities of Europe, and upon his return in 1518, founded the Royal College of Physicians and Surgeons.

This century, so prolific in the production of renowned medical men, was destined to give to the world an anatomist, who, like Mondino, nearly two centuries earlier, should by his genius and by his application give to anatomy the high position with which it is regarded to-day—this man was Andrew Versalius, professor in Padua, who, in 1537, when only twenty-nine years of age, published his immortal work on the construction of the human body. Ingrassus (who among us has not been perplexed by the lesser wings of the sphoid) flourished

at Naples in 1551, and Fallopius (he of the aqueduct) in 1562. Harvey studied anatomy in Padua in 1598, and began those researches which led to his immortal discovery. His work on the "Anatomical Exercise, and the Motion of the Heart and Blood in Animals" was published in 1628, and in 1661, four years after his death, Malpighi gave ocular demonstration of the circulation, in the lung of a tortoise and the lung and bladder of a frog. Space does not permit me to mention one-hundredth of the number of distinguished surgeons and anatomists which crowd the pages of medical history at this period, but I cannot forbear mentioning one name more and that is Nicholas Tulp (1593-1678), not only because he was renowned as a surgeon and as a lecturer upon anatomy, but because he has also been immortalized by a great painter. "The Lesson in Anatomy" by Rembrandt, hanging in the Royal Museum at the Hague, with which, from hundreds of reproductions, the whole world is familiar, and which for color and tone cannot be surpassed, represents Nicholas Tulp, in the act of demonstrating the muscles of the forearm to his pupils. Other distinguished men of the period were John Hunter, Dessault, Anel Petit, Chopart, Chesselden, Percival Pott, Cæsar Hawkins, Benjamin Bell, Heister, Scarpa, and Gimbernat. Here, however, we must peremptorily stop, for the names of the surgeons and anatomists of this period rush upon us like a flood. The rapid dissemination of knowledge by means of the printing press, the founding of new colleges, the establishment of new hospitals and medical societies developed the genius of so many illustrious men (many of them well-known to you already) that mere historical mention is not only unnecessary, but inappropriate in this place.

Allusion has been made to the distinguished anatomists and surgeons of by-gone ages, in a tolerably correct chronological order, to demonstrate beyond cavil what has been already said regarding the intimate relationship that anatomy bears, not only to every department of medicine, but especially to surgery. Perhaps, also, I may own that a touch of sentimentalism is mingled with this humble effort, because the very mention of the names of these illustrious men must recall to your recollection, as they do to mine, those periods in our own lives when we were all necessarily much interested in remembering them; those student days of "auld lang syne," the memories of which have been perhaps overshadowed by the more serious responsibilities, cares, and anxieties of professional life, but which can never be entirely forgotten, and which, on occasions like the present, it is good for us to recall, because it takes the edge off tiresome routine, gives renewed elasticity to the overworked mind, and softens by its recollections of days long passed, the harsher judgment of our fellow-men.

Before leaving the subject I will introduced one item of interest regarding anatomy, which is not generally known and which is both unique and interesting. It is an expense account incurred in carrying on a course of anatomical lectures in 1645 in England. I take this

from that most interesting work "The Craft of Surgery," by John Flint South, who copied the document verbatim from the expense book of the Barber Surgeons' Company. It is headed:

THE CHARGES OF THE ANATHOMYE BETWEEN MICHAELMAS AND CHRISTMAS LAST.

	£ s d
Paid for carryeing cophin to Newgate	00.00.06
ffor horsehire to the place of Execution	00.02.00
ffor the ffees at the place of Execution	00.05.06
ffor expenses at St. Gyles xij^{d} to the Carman xij^{d} and for washing the bodye xij^{d}	00.03.00
ffor perfumes xij^{d} wax candles xij^{d} soape j^{d}	00.01.03
ffor lynnen for the Bodye	00.06.08
To the Beadles Assistant in taking the Bodye	00.01.00
Paid the Parsons dutye for the buriale ij^{s} for ye grave xij^{d} for the Clerke and Sexton xxij^{d}	00.04.10
To the Bearers ij^{s} and expended at the burial ij^{s} vj^{d}	00.04.06
ffor a cophyn to burye the bodye in	00.03.04
To Doctor Godard for reading six lectures	06.00.00
To Mr Nicholas Brothers and M William Watson who desected the bodye XL^{s} appiece	04.00.00
Paid for 3 dynners for the Masters or Governours, Assistants, Reader and Desecters	10.00.00
ffor candles for 3 mornings	00.11.11
To the twoe Beadles, their ffee for three dayes attendance	00.10.00

In casting up these accounts it is very amusing to discover that the three dinners given to the Masters and Governors cost considerably more than all the other expenses of the course put together. Physicians and surgeons have ever been the same since Hippocrates was born.

There is another and by no means an unimportant benefit derived from the careful study of anatomy which is not generally considered. The human body is a closed book to the ignorant doctor, but to the accomplished surgeon and the anatomist it bears the impress and the recorded triumphs of so many mighty men in medicine that it must ever be regarded with reverence and respect. The student who carefully studies this unique volume becomes necessarily familiar with the names of these illustrious men, and is incited to learn more of their toils, their triumphs, their lives, and their deaths, and is led to investigate the history of medicine, an interesting but a much neglected study in these days of "the higher branches" education. Who ligates the femoral, and knows not of Scarpa? Who studies the anatomy of hernia, and does not know Poupart and Gimbernat? Who plans the lines of a plastic operation of the face without remembering Steno; or the mouth without regard for Wharton and Rivini? How would the experts in cerebral surgery proceed without a knowledge of Sylvius and Roland? Who looks at the intricate formation of the base of the brain without making the great circle of Willis? Who studies the reproductive system without coming face to face with Tyson and Cowper, Bartholini, and Douglass? What lecture on typhoid fever would

be complete without mentioning the great Swiss names of Peyer and Brunner? Shall I go further and take you on an interesting tour? Shall I lead you through the canal of Nuck, show you the wondrous pyramids of Malpighi, and the curiously wrought aqueduct of Fallopius, then explore to the tortuous caverns of Highmore, and passing the island of Reil, return by the Haversian channels cut in the solid bone? Ah! no! I can only suggest an itinerary through a most beautiful and prolific country, where, by means of complex and intricately wrought machinery, a thousand mysterious processes are continually being carried on, propelled by the same unknown, unseen, and inscrutable power that holds the planets moving in their ethereal spaces in harmony and unison forever.

I have thus imperfectly called attention to the importance of the knowledge of anatomy to the medical profession generally, and especially to that branch of it which it has been my honor and my privilege to teach for many years in my own school. The surgeon must understand not only the outside of the human body, but every inch of the inside. He must be prepared to recognize diseased parts by his knowledge of pathological anatomy; he must know the anatomy of regions, and the minute formation of the parenchyma of organs; he must thoroughly remember the course of the vessels, and their relation to each other, to fascia, and to nerves. He must understand definitely what I may term the "package" of the great splanchnic cavities. He must be familiar with the naked eye appearances of the organs both in health and disease; the folds of the great membranes and their methods of enclosing the organs which they surround must be fixed in his mind. The formation and functions of the brain, and the topography of the skull must be studied for the proper application of instruments. Indeed, the nature and peculiar conformation of every organ in the body must be remembered by the operative surgeon for the proper discharge of his daily duties. Such knowledge often comes into requisition when least expected, increases self-reliance, and gives steadiness and skill to manipulations. With such knowledge as this, combined with a thorough appreciation and practical application of asepsis and antisepsis, and invested with the attributes of courage, judgment, and dexterity, the apotheosis of surgery becomes complete. Above the clamor and clash of colliding railway engines and the débris of falling buildings; in the midst of those appalling calamities that stir a nation to its centre; in the great labor strikes and the horrors of civil war; through the carnage and bloodshed of the battle-field and the roar of devastating flames the genius of surgery rises triumphant, and, with healing in its wings, brings succor to the crushed and broken victims of these dire catastrophes.

The very ends and aims of surgical science render it noble, and the brilliant achievements already accomplished by the illustrious men who have devoted their lives to its interests add increased dignity to its position among the learned professions. At a late meeting of the British Medical Association, Sir William MacCormac, in his address

"On Some Points in Connection with the Surgery of War," made this remarkable statement: That during the last Egyption campaign, the sanitary precautions taken had been so complete, "That not a single case of infective wound disease occurred during the whole campaign." What a magnificent record! What a triumph of the surgeon's art! When I consider the operations of nephrectomy, cholecystomy, prostatectomy, and splenectomy; the procedures devised for intestinal anastomosis, the daily advances in cerebral localization, the successes achieved in hysterectomy, both vaginal and abdominal, the new departures in rectal, urethral, and bladder surgery, and remember that all of them are of comparatively recent development, I say again, that the golden age of modern surgery is assisting by its brilliancy in that scientific illumination, which, by general acknowledgment, is crowning the last days of the nineteenth century.

Suture Material in Hernia and Other Operations.

By Horace Packard, M.D., Boston, Mass.

This paper is presented with the assumption that all surgeons are in agreement upon the following points relating to hernia operations:

1st. The close approximation of the deep layers (muscle and fascia) by buried sutures.

2d. The attainment of union of those structures without suppuration.

3d. The absorption of the sutures of approximation by the time their usefulness has passed.

It must be conceded, if the above be accepted, that the relation of suture material to hernia operations is an important one, because,

1st. We possess but two absorptive suture materials—catgut and kangaroo tendon.

2d. Neither of these possesses in the highest degree the qualities necessary to attain the desired ends.

Kangaroo tendon is obtainable in short lengths only; is variable in pliability according to the age of the animal from which it is taken; is never constant in size; and the future supply must at no remote date cease, on account of the comparatively small area of the earth's surface inhabited by this interesting animal.

Furthermore, it is rarely practicable to utilize kangaroo tendon for running or continuous sutures, because of its curtailed length; the only alternative being the employment of many interrupted sutures, each bearing a knot commensurate in volume with the diameter of the strand employed. It is my belief that such voluminous knots are often the cause of delayed union. They antagonize the close approximation of the tissues, resist absorption, and sometimes become a foreign body expelled only by the great activity of the leucocytes, and exudation (suppuration).

To the credit of kangaroo tendon it may be said that it is a material not likely to convey infection to a wound if ordinary care be observed in its manipulation. Unlike catgut, it is presumably sterile when it comes from the animal, hence the only source of contamination to which it is subject is the handling received in process of removal and subsequent preparation. It offers, therefore, little or no obstacle to sterilization by maceration in 1 to 1,000 sublimate solution, or boiling in alcohol, although repeated subjection to high temperature impairs its strength.

I think I am not in error in stating that probably, at the present

time, kangaroo tendon is the most widely used of any material for buried sutures.

Catgut, the most valuable of all our suture material, is also the most treacherous. Its very source, the intestinal canal of the sheep, and its method of manufacture give positive assurance that in its raw state it is the bearer of multitudes of bacteria. This at once calls for measures to effect sterilization. Of methods of accomplishing this we have many, and their multiplication is but evidence that none yet has been discovered universally effectual. Subjection to a high degree of temperature surely kills all bacteria, but it as surely ruins the material by turning it into gelatine. It contains, normally, water 23 per cent., fat 7.5 per cent., and collagen 69.5 per cent. This is what remains after the process of manufacture is complete. In its preparation the intestine is first pressed between rollers to remove the fecal contents, then macerated in a solution of potassium hydrate, then scraped and rolled again. This removes nearly all the mucous and muscular tissue, leaving only connective tissue, the composition of which is as above stated. The intestine is then twisted and dried. The variations in size are attained by twisting two or three intestines together for the larger sizes, and splitting the gut longitudinally for the smaller strands.

The bacteriology of the sheep's intestinal canal becomes, then, the bacteriology of catgut, plus such additions as are made in the process of manufacture and subsequent handling.

Fortunately, according to culture tests which have been made, pathogenic bacteria are not often present in the sheep's intestine. There exist constantly the hay bacillus (the bacillus subtilis), and frequently the potato bacillus (bacillus mesentericus vulgaris), neither of which is pus-producing. There is, however, the menacing danger always of the presence of anthrax spores, anthrax being a disease especially common among sheep, and bacteriologists recognize the probability of the presence of tetanus bacilli in the intestinal canal of all herbivoræ. Neither can we dismiss the probability of contamination in the last steps of its manufacture. Girls are employed to wind the finished product into skeins or coils. They are not required to observe any special rules of cleanliness or person; they are hired at ruinously low prices; they come from the homes of poverty and squalor. Limitless opportunity is thus offered for contamination with any form of pathogenic bacteria.

Clinical tests are the most convincing, and at the same time damaging to the reputation of catgut. Not a few outbreaks of wound infection have been traced to ineffectually sterilized catgut. Anyone who has employed this material extensively cannot but have been impressed with its capabilities for evil, especially when used within the abdominal cavity or buried in the tissues anywhere. The most apparent effects are seen when it is used for skin suturing.

A wound unites throughout without sign of infection; no redness, no swelling, no suppuration, and at the expiration of ten days the

portion of the suture material within the tissues is absorbed and the external parts are desiccated and fall off under the slightest touch. This is ideal. How different the other picture; from the fifth to the seventh day there appears a painful swelling and reddening about each stitch; presently a fully developed "stitch-hole abscess" makes itself manifest by the discharge of from a few drops to a teaspoonful or more of pus.

It is generally accepted by all surgeons that in the one there has been employed a surgically clean (aseptic) suture material; in the other an unclean one, which has infected the tissues at every needle puncture.

All this is enough to awaken grave suspicions toward catgut as a suture material, and makes the matter of its final preparation for surgical purposes of supreme importance.

Catgut, as ordinarily prepared, quickly becomes, on coming in contact with water or blood, a slippery, untrustworthy material, as far as stability in tying is concerned. It knots in large, unwieldy convolutions, prone to untie, and is an obstacle to immediate union. The solubility of catgut under the influence of heat and moisture is great. Imbedded in the tissues, it rapidly swells, softens, weakens, and loses its function as a retention agent in a few days. Hence its unreliability as a material for buried sutures where retention of tissue in accurate apposition and resistance to strain through a period of two weeks or more is desired.

In spite of all these damaging qualities, it has virtues and possibilities which have placed it and maintain it at the head of all suture materials for general purposes. These are:

1st. It is obtainable commercially in any desired lengths up to twenty feet.

2d. It is supplied by the manufacturer in any and unvarying sizes.

3d. Its source is inexhaustible.

4th. Its solubility and its possibilities of modification through chemical treatment lead me to believe it to be our future main reliance for buried suturing.

During the past year the writer has been conducting a series of tests and experiments upon the surgical preparation of catgut with the view of producing a material which should fulfil more effectually than has yet been done its requirements for the purpose of buried suturing.

The obstacles in reaching the desired end are great. Any process, to be of real value, must be:

1st. Simple and economical.

2d. Must not diminish the tensile strength or flexibility.

3d. Must indurate the catgut to make it sufficiently enduring.

4th. Must not impregnate it with any chemical material which will irritate the tissues or prevent its final absorption.

5th. Must preserve or improve upon its tying qualities.

6th. Must render it sterile beyond all question.

To do this the usual methods in vogue must be largely or wholly discarded, for a high degree of heat surely, in a degree, at least, gelatinizes and weakens; while maceration in watery solutions of chemicals at ordinary temperatures equally surely deteriorates.

My work is not yet done in the line of investigation. I can only say that I have produced a ligature material of great strength, flexibility, and excellent tying qualities, which resists absorption. Another year of laboratory experiments and clinical tests is necessary to complete the work.

The following samples are submitted for your inspection.

REPORT

OF THE

SECTION IN GYNECOLOGY

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Certain Ethical Phases of Gynecological Practice.

BY SHELDON LEAVITT, M.D.

In every department of practice one early encounters responsibilities of a trying nature, and is required to determine rules of conduct which involve important ethical questions. It is for this very reason that medical and surgical practice should not be taken up by those in whom cupidity is the ruling passion, whose moral principles are not well settled, and whose sensibilities are not morally keen.

In the popular mind the surgeon is a man of intrepidity and courage, and for these qualities to be admired; but a man also lacking in sympathy and that gentleness of spirit which should characterize one whose duty it is to inflict the severest physical suffering with a view to the betterment of the sufferer. It is true that the practice of surgery is in some sense a hardening process. The surgeon, as a natural result of familiarity with scenes of suffering and death, ceases to be profoundly moved by the emotions which often stir the ordinary heart

to its very depths; but experience does not necessarily make of him a monster of cruelty, or a human butcher, as he is sometimes hysterically termed, though we regret to say it sometimes does. That a surgeon ever becomes cruel in outward appearance, or even at heart, should be a cause of deep regret on the part of those whose sensibilities retain a modicum of pristine sensibility, and whose motives, despite the seductive influences surrounding him, remain of the purer and better kind.

The physician and surgeon, confronted as he is at the very outset of his career, before he has given ethical questions due consideration, is apt to arrive at unwise conclusions, especially if deficient in moral virility. Your chairman is not disposed to set up any unattainable moral standards, but to consider before you certain points of conduct, with respect to some of which he admits there is ample room for more than one honest opinion. There are among us many who are inclined pharisaically to observe the letter, rather than the spirit, of ethical obligation, ignoring the truth that moral principles rest not upon arbitrary requirements and mere conventionalities, but upon considerations of human interest and the ultimate good of mankind. Conscience, when unwarped by prejudice and unblunted by disregard, prompts to one action and dissuades from another, solely because the indicated line of conduct leads with unwavering certainty to the largest good for all concerned. According as we follow such dictation is individual and general evolution enabled to work out its beneficent results.

But now to the particulars. A moral responsibility, which rests with much weight upon the conscientious operator, is that concerning his personal fitness to do well the surgical work required. The same sense of responsibility is felt by the conscientious physician with respect to his ability to serve well, by his medicines, the interests of his patient; but in medicine, the real responsibility involved is not so great, owing to the fact that the possibilities of serious harm are not so pronounced as in surgery. The question, Am I well equipped, both in point of knowledge and mechanical skill faithfully to serve the best interest of the confiding patient before me? is one which the operator ought seriously to propound to himself, and be able affirmatively to answer, before he puts knife to the case. In order to be forearmed he should consider, with wise forethought, possible complications, and map out with scrupulous precision the available resources with which to meet them. In the opinion of your chairman, there is a great deficiency of regard accorded these important considerations, even by men of honest intentions. Not long ago your chairman was called some distance out of the city to do a uterine curetting for a practitioner of our school of medicine, and, in conversation concerning surgical work in general, this man of medicine, who had felt himself incompetent to manage a case so simple in character as that which had just received our attention, expressed perfect confidence in his ability to do deft abdominal surgery. There is no intention to inveigh against the moral right of

anyone, however inexperienced, to undertake work for which he is even theoretically qualified, since every surgeon must gradually wear away his novitiate characteristics. One is enabled to develop true skill only through experience, and these strictures are directed against those only who hold human health and life as commodities to be turned over to the tender mercies of a successful bidder, without regard to his qualifications as a trustworthy conservator, or who feel that to shrink from any undertaking, no matter how dangerous or difficult, is an indication of weakness. As a result of practice it is true we acquire manipulative skill, and the confidence that affords so material aid in the actual doing of operative work; but we have no right to the necessary experience unless we have made ourselves familiar with each step of the procedure through clinical observation and faithful study. Anything short of this makes us mere jugglers.

Then there is the reckless surgeon. He may be well informed with regard to methods and general *technique*, and possess wonderful manipulative skill, but he is a reckless, impatient soul, hurried and goaded by undisciplined and refractory impulses. He jumps to conclusions, makes off-hand diagnoses, prides himself on short operations, and is little disturbed by unfavorable results. Comet-like, he blazes in the heavens, and, comet-like, fades before he reaches life's meridian. He fills, it may be, a most important place in surgical evolution, and yet is the object of many a summons from the bar of moral justice.

For the brilliant achievements of such an one we feel a justifiable admiration, because the force of genius always commands it; but what shall we say of a surgeon of the old school who laughs at new methods, depreciates the value of strict antiseptic precautions, and is little moved from his old and well-beaten ways by the achievements of up-to-date surgery, however grand? It is true that he is sometimes constrained so far to countenance certain innovations as to commend them publicly, but his precepts and practice are widely divergent. When he goes to his work, after hastily preparing his hands, you see blue in the subungual spaces, and he avails himself of the most convenient aid, in the heat of an emergency, without questioning the assistant's preparedness. His percentage of loss is heavy, at which he is distressed, yet by it he is not reformed. What about this man's moral responsibilities?

But gynecology is not all surgery, and there are ethical lines reticulating the medical, as well as the surgical, phases of practice among women that we shall do well to study somewhat in detail.

The gynecologist is subject to peculiar temptations which appeal to his cupidity, and among them we may reckon the opportunity to reap a harvest from women whose lively fancy and vivid imagination have made them mental invalids. Many of women's ailments, as we all know, have their tap-root in the mind, and such subjects accordingly become an easy prey to the unscrupulous doctor who has a dominant regard for filthy lucre. Women are apt to be controlled by their intuitions, while their prejudices and prepossessions are not easily overcome, so that great tact and consummate discretion are indispensable to the

attainment of the best results of treatment. They will not often tolerate raillery, or even pleasantry, directed at their supposed ailments, especially by a strange physician, and the part of wisdom is to handle their delusions in a gentle, but firm, manner, conceding to them, by implication, some claims of the genuineness of which we are not fully convinced, and giving to each symptom its due weight. It follows that a truly honest physician or surgeon may find it wise to resort to drugs, or even operative measures, to set in motion curative mental impulses and impressions in those who are ill only because of overpowering morbid convictions. We meet women who have become so possessed by the idea that their only relief is to be found in operative measures, that nothing short of an operation is likely to effect a cure; while others have such an antipathy to surgery, and so great a fear of it, that its mere mention is sufficient to precipitate them into a state of direct mental and physical chaos. But to make traffic of mental weaknesses and morbid fears, instead of putting forth honest endeavor to correct them, is unworthy one who poses as a benefactor.

Should unmarried women be subjected to thorough pelvic exploration? This question is often asked, and to it various answers are given. Some would have us make no examination except as a *dernier ressort;* but they are mainly those who undertake the management of all sorts of pelvic troubles without proper investigation, laying no emphasis upon the surpassing advantages derivable from physical exploration, and possessing no adequate knowledge of pelvic pathology. It is alleged that, besides the reduction of a girl's modesty resulting from such an investigation, currents of thought are thereby directed to the generative sphere which may prove prejudicial to the health and morals of the subject. But have we not reason to believe that possible lesions, excluded by the results of an examination, or recognized and cured, had they been left to luxuriate in a sensitive subject, would likely have produced pernicious results far outweighing those apt to be engendered by a well-conducted examination? The truth is, there would be fewer physical wrecks among our girls if careful examinations were more common, for there are many remediable ailments which, when neglected, work disaster to physical health and vigor.

And again, when it is found that there are conditions which make vaginal exploration and intra-vaginal medication desirable, should we not set aside, if necessary, a prudish anxiety to preserve "the proofs of virginity" in order that the immediate diagnostic demands may be fully met? A young woman whose character is above reproach, and whose mien and bearing are those of a virtuous maiden, never requires physical evidence to convince a husband who is worth the having that her integrity is above question; while, on the contrary, a woman of wanton manners would not be able to establish her essential virtue by the possession of an intact hymen of the most elaborate form and dimensions.

The ideal physician has not yet been actualized in life. The best of us have our weaknesses. We are all bound more or less closely by

conventionalities, and feel circumscribed by current habits of thinking and living. It cannot well be otherwise; but, as guardians of the physical and mental health of the community, we should resist the impulse toward servile conformity, and settle questions of morals, as well as those of contingent occurrences, for ourselves. There are many evils in every community, injurious to mental, moral and physical health, which merit rebuke. One of them is the marriage of young men and women whose children are apt to take on the physical weaknesses, and follow the vital tendencies of their polluted or degenerate parents. There are men all about us bearing in their organisms taints which are more to be feared than death, and yet we interpose no word of serious objection when we see them about to enter into conjugal relations with lovely and confiding girls, the fountains of whose purity, or the health of whose offspring, will be exposed to the foulest contamination.

There is no denying that it is far easier to preach than to practise, for the truth is demonstrated in the lives of all, those of the medical fraternity forming no exception. Doctors ought to be wiser in matters pertaining to heredity than are the laity, but it is plain that they are not; or, to take a more charitable view of their attainments, they give most unwise heed to knowledge which they possess. But let us throw over them the cloak of charity, for love is a blind goddess, and the mésalliances among our brethren show that she is a blind leader of the blind. Let us pray that they may not all fall into the ditch.

The prevention of pregnancy is a question which has agitated physicians and social scientists to a phenomenal degree. It is a subject in which many feel a conscientious interest, and concerning which they recognize a profound responsibility. Laws have been framed which make it a misdemeanor to offer advice looking to the prevention of conception, or to furnish the means by which such a purpose can be accomplished. Such laws are undoubtedly wise in their intention, and yet all of us are well aware that cases are not infrequent, wherein, as lovers of humanity, and as conscientious men and women, we feel a sense of obligation to aid in the prevention of conception by the best advice of which we are capable. It is all well enough to say that nature ought to be allowed to take its course, and that a kind providence will doubtless overrule apparent evil, and out of it all evolve a high order of results. But with strains of insanity and other serious disorders in the subjects; with dipsomania and continual intoxication in the husband; or tuberculosis or syphilis in the mother, united with a strength of impulse which makes neither party able to control the sexual relations, have we not a moral, if not legal, right to extend the aid of our advice to prevent procreation? These people should practise self-restraint, and perhaps they do; but total abstinence is quite another thing, and is hardly to be expected. Besides, physical and mental depression is liable to follow protracted *absque marito* in the conjugal state. The study of social science cannot wisely be separated from that of physiology and pathology, and any attempt to do so is

certain to result in an incompleteness which cannot fail to render rules of conduct and proposed plans for the betterment of social conditions relatively partial and unpractical.

Your chairman presents no plea for leniency of judgment upon these Malthusian ideas, for he is strengthened by the conviction that they represent the consensus of professional opinion.

This leads us to a consideration of the larger question of abortion, in which gynecologists, as well as obstetricians, should feel a deep interest. We cannot too strongly condemn the practice in general, whether undertaken by women upon themselves, or by unscrupulous physicians whose cupidity has acquired a mastery. It is one of the crying evils of the *fin de siècle*, and is bringing upon those who are the subjects of it numerous and serious ailments, as we gynecologists stand ready to testify. But what is astonishing is the general apathy concerning it. Notwithstanding the heinous nature of the offence in the eyes of God and man, we hear few voices publicly raised in its condemnation. Women share each other's confidences and become mutual instructors, treating the subject so lightly as to break down moral sentiment and overcome conscientious scruples to a lamentable degree. The clergy, while not hesitating to raise their voice against other evils, appear to regard this as a forbidden topic; and even physicians are not always disposed to condemn the act in the terms which its evil nature deserves.

But there are features of this question of abortion, which many are disposed to overlook and which the law fails to recognize, well worth serious consideration. It is conceded that, for the protection of maternal life, the physician is justified in inducing premature expulsion of the product of conception, but are there not other considerations which should be regarded as sufficient justification of the act? Your chairman will not attempt to recite them, but, as an example, he will point to a pregnancy in which the parents are common criminals or drunkards.

It should be added that there is no intention to suggest enlarged liberty for the individual physician in the practice of abortion, but rather the wisdom of a provision, in the interest of society, for wider discretion to be accorded an established medical council, or a definite number of physicians assembled to consider the case. Such a suggestion some of our wise and prudent may regard as a mere fantastic conceit; but, when we see the sins of parents so often visited upon their innocent progeny, we cannot but feel that farther effort should be made to limit and circumscribe such deplorable effects of uncontrollable indulgence.

It may be that a more practicable and less objectionable method of controlling such conditions is to be found in the establishment of a marriage license board made up of physicians, who shall refuse permission to marry in all instances of mental, moral, and physical disqualification.

Another pertinent suggestion, and one which your chairman has long sought an opportunity publicly to make, is that of castration for all

criminals, both male and female, who are found guilty of grave offences. There is undoubted heredity in criminal impulses, and society has a right to demand protection from its baneful influences.

While the foregoing are matters in which medical men and women in general should manifest a deep interest, they are of special concern to gynecologists, and for this reason they have been here introduced. But we come now to consider a few specific questions of an ethical import concerning the practice of gynecic surgery.

First of all let us bring up the question of capital operations for the possible relief of nervous symptoms. It has been quite uniformly conceded that there are few conditions, not menacing to life, which justify invasion of the peritoneal cavity. At the same time we cannot but recognize a disposition of surgeons to extend the benefits of their superb science and art to the relief of conditions not necessarily inimical to life, but decidedly so to health and comfort, even though it involve entering the sacred precincts of the peritoneum. It cannot be denied that a protracted and helpless state of invalidism, especially when accompanied by pain, renders life hardly worth living, and forces one to the adoption of possible means for relief even at the expense of some risk to its continuance. This avenue of escape for the valetudinarian has been much widened of late, and has become more inviting by reason of the greatly reduced mortality resulting from asepsis and improved technique. Under proper safeguards the impulse is entitled to moderate encouragement, though it must be confessed that there is danger of the movement carrying us to an unwise extreme. Your chairman cheerfully admits that his own convictions have undergone considerable change during the past two or three years, in the face of which he still accounts himself a conservative surgeon.

Another question, over which a great deal of sentiment has been shown, is that of removal of the ovaries from unmarried women. There is no doubt that about the generative sphere gather the strongest forces which make for connubial peace and happiness. All true sentiment between the sexes springs from it, and it is manifestly unfair to womankind unnecessarily to mutilate or ablate the sexual organs. Removal of the ovaries has probably been practised to an unnecessary degree; and yet, with all the recklessness which has been charged to it, we have reason to believe that the operation has a surplusage of good to its credit. Some lives have been lost, and, in the few, suffering has been increased, yet on the whole it is probable that these evils have been more than counterbalanced by the renewed vigor and restored peace of mind and body brought to the many. Let us remember that all surgical measures find their justification in the preponderance of good which they bring to suffering humanity, and the aid they give to the forces which are steadily elevating and ennobling the race.

There are many who take a narrow physical view of such questions, exalting mere sensual gratification above the essentials of true living. We should not reckon it as woman's chief function to be the pleased and pleasing plaything of selfish husbands, or to co-operate to the maximum in populating a sphere already teeming with human life.

But then, we have no good reason to suppose that the relief of a woman from the agonizing nervous disturbances growing out of imperfectly developed genitalia, even at the expense of their ablation, so changes her womanly nature, or so injures her instincts, as to disqualify her for discharging the duties, bearing the responsibilities, and performing the delightful ministries of married life. And even should it cause her to enter into sexual relations with diminished zest, we are not hastily to infer that the sum total of human happiness would be thereby in the least reduced.

It is evident, notwithstanding the recently developed disposition to extirpate the uterus along with diseased appendages, that the surgical mind inclines more and more to what may be reasonably regarded as conservative surgery. To such a degree does this disposition characterize some operators that, rather than deprive a woman, even though married and already the mother of two or three children, of the organs essential to reproduction, as, for example, the ovaries in their entirety, they prefer to compromise, to a serious degree, the patient's chance of complete restoration to health by a resection of the ovaries rather than destroy the possibility of further child-bearing by complete excision. The surgeon does not have every case committed fully to his discretion, and hence may be limited to a one-sided operation. But, when left to conduct a case in accordance with his own judgment, he should remember that moral considerations may dictate most radical measures. In making up a verdict under these conditions, the patient's constitution, both mental and physical, is entitled to close scrutiny and much weight. While, in a given instance, doubt of the advisability of complete removal of both ovaries may be reasonably entertained, provided the patient possesses a constitution disclosing none of the evidences of morbidity so often witnessed, in another case, presenting the same operative requirements, but with the ear-marks of serious dyscrasias or mental aberration there is left but little room for honest doubt. Women long to become mothers, but we know that many of them are mentally, morally, or physically unfitted for maternity, and in the way of such ought to be thrown every rational hindrance to fruit-bearing by those who are in some sense the constituted guardians of society.

Your chairman doubts not that he will be regarded by some as lacking in proper regard for ordinary conventionalities, but he is not disposed to forestall such opinion by either qualification or denial. It is but fair, however, that he be permitted to repeat what has already been implied, that the intention herein is chiefly to interrogate thoughtful minds, and present ethical problems deemed by him highly important, but much neglected, with a view to betterment of present conditions. The beaten path is not always the best one, and popular opinion is not always the wisest. "Whoso would be a man," says Emerson, "must be a non-conformist." The medical man, the medical woman, are projected into the very midst of moral questions requiring delicate treatment, deliberate consideration, and wise decision; and they are to be congratulated who meet such responsibilities in an earnest and honest spirit, and bear them to wise and happy issues.

Prolapsus Uteri.

By W. E. Green, M.D., Little Rock, Ark.

There are but few disorders of the female genital organs that are more worthy the attention of the gynecologist than is that of uterine prolapsus, a condition that is progressive in its nature and is productive of much discomfort and suffering. A treatise on any form of displacement of the uterus could hardly be made comprehensible without some reference to the various lesions that produce it; and yet, to enter into a detailed account of all the predisposing pathological factors that are causatively responsible for the morbid process would require more time in its reading than is usually allotted to a paper in this Institute. In dealing with the subject of prolapsus from a practical point, the various stages of displacement must be considered. This varies, including every degree, from slight falling to the complete extrusion of the uterus through the pudendal orifice. However, for convenience in description, authorities have divided uterine prolapsus into three stages.

First. Where there is but slight sagging of the organ, without material change in its axial relations, the cervix resting on the floor of the pelvis.

Second. Where the axis is changed, the body retroverted, and the cervix appears at the vaginal outlet.

Third. Where the organ projects through the vulva.

An hereditary weakness of the uterine ligaments and a faulty development of the pelvic floor are the most noteworthy etiological elements in the production of uterine prolapsus, and the injuries that these structures sustain during parturition rank among the greatest of predisposing causes. While it is true that the lacerations and overdistention of the vagina and perineum incident to labor, enfeebling their supporting power, are cardinal factors in the production of the disease, many other causes aid in developing the morbid process, as, augmented intra-abdominal pressure and increased weight of the uterus. Prominent among the intra-abdominal causes may be mentioned weakness and relaxation of the abdominal walls; absorption of the pelvic cellular tissue from any cause, and stretching or elongation of the ligaments. All the various pathological conditions that increase the weight of the uterus aid in its descent, as subinvolution and tumors. In some subjects, where this hereditary weakness of the uterine ligaments and perineum exist to a marked degree, a complete prolapsus occurs in the nullipara where an injury of the structures has never been sustained.

The disease is progressive, and usually chronic in its advancement, the various pathological conditions that accompany it occurring sequentially. The equilibrium of the pelvic viscera having been destroyed, the organ slowly descends, taking on new complications as it advances. The cramping of the vessels causes stagnation of the circulation, with consequent hypertrophies. The uterine ligaments become stretched, and as the descent progresses the vaginal walls, through their cervical attachment, are dragged downward, producing both cystocele and rectocele. This process may continue until inversion of the vagina takes place and the cervix rests well outside of the pudendal orifice. The traction exerted upon the cervix often superinduces pronounced elongation and attenuation of its supra-vaginal portion; while the circulatory changes may cause hypertrophy of the infra-vaginal cervix and thickening and induration of the vaginal mucous membrane. The irritating qualities of the urine and the chafing of the clothing often produce abrasions and ulcerations of the protruding mass. In some instances, in which the perineal support has been destroyed and the uterine ligaments retain a firm degree of tonicity sustaining the body in position, the cervix becomes greatly elongated and may protrude through the introitus, presenting all the gross appearance of a genuine prolapsus of the second or third degree. In rare cases the vaginal prolapsus is superinduced by a primary hypertrophic enlargement of the cervix, which drags upon the vagina, causing an inversion of its upper segment.

The symptoms of prolapsus of the uterus vary greatly in kind and severity. Some patients suffer but slight inconvenience though the organ may protrude from the vulva, while others with even a slight degree of prolapsus may experience the greatest discomfort. In fact, incomplete prolapsus usually causes more suffering than the more advanced stages. Backache and dragging pains in the loins, a feeling of heaviness in the perineum, and general fatigue are the most pronounced symptoms. Troubles in micturition are frequently encountered, as incontinence or retention of urine, dysuria, or polyuria.

Diagnosis is made by an examination. In slight cases the uterus will be found to be low down with the cervix resting upon the pelvic floor. In more advanced cases the cervix is found presenting at the vaginal orifice, with consequent changes in the uterine axis, while in complete prolapsus the cervix and part of the body of the uterus may rest outside of the pudenda. It must be remembered that at times, when the patient assumes the recumbent position, the protruding mass recedes and may be found resting within the vulva; therefore, in order to ascertain the full extent of the prolapsus, the patient should be directed to strain downward, or the examination should be made in the erect position. Inversion of the uterus, supra-vaginal elongation of the cervix, protruding myoma, and urethrocele should not be mistaken for procidentia.

TREATMENT.—Since the term prolapsus uteri embraces such varied degrees of displacement and is caused by such a variety of pathological

disorders, the cure depends wholly upon the correction or removal of these conditions; therefore, its management necessarily offers a broad field for treatment which includes hygienic, therapeutic, mechanical, and surgical measures.

Hygienic.—Women who suffer from prolapsus should be advised to observe all the sanitary requirements of dress. Clothes that constrict the waist should be interdicted. When obesity or a relaxed condition of the abdominal walls exists, a well-fitting abdominal support should be recommended. Such patients should be instructed to avoid long walks, standing upon the feet for long periods, lifting heavy weights, or straining at stool. Disorders of digestion and constipation should be corrected, and such other measures as will improve functional activity in all the organs of the body instituted.

In mild cases of prolapsus, those of the first degree, where grave secondary complications have not taken place, it might with reasonable propriety be said that the treatment is virtually prophylactic in its nature.

Chronic endometritis and consequent uterine engorgement is one among the frequent predisposing causes of uterine prolapsus. When it is found to exist it should be overcome by means of curettement, hot vaginal douches, boro-glyceride and alum tampons, and electricity. If a laceration of the cervix exists it should be repaired by trachelorrhaphy, or if extensive induration and hypertrophy accompany it, amputation of the neck should be performed. These measures greatly aid in reducing the chronic enlargement of the organ and overcoming the displacement.

Retroversion is a prolific factor in the production of prolapsus; in fact, all cases have more or less axial changes. The organ should be restored to its natural position, and, if necessary, after the tenderness has been relieved by the hot douches and tampons, a carefully fitted pessary should be applied and worn until all the hypertrophy has been removed. Electricity has a very beneficial effect in restoring the tonicity to the over-stretched ligament in many of these cases. If the organ cannot be reduced or cannot be maintained in the proper position, the surgeon should not hesitate to open the abdomen and do a ventral fixation, at the same time break up any adhesions that are present and remove existing small fibroids or diseased appendages.

Since injury to the perineum is the greatest causative factor in the production of prolapsus, it becomes imperative, as a prophylactic measure, that care should be observed in the protection of these structures during and after parturition. After every labor a critical examination of the perineum should be made, and every tear, even of slight extent, should be repaired in the most exacting surgical manner. When an old standing injury to the pelvic floor exists, it should at once engage the attention of the physician. A developing cystocele should be overcome by an anterior colporrhaphe, and a rectocele should be corrected by a perineorrhaphy or a colpoperineorrhaphy.

When the causative pathological condition in uterine prolapsus

has been corrected by surgical measures, the after care of the patient is worthy the most careful consideration of the physician. She should be kept in bed until the resulting cicatrices have become strong and the relaxed or over-stretched tissue has had time to, in some degree, regain its lost tonicity. Her general health should be looked after, and such remedies prescribed as may be necessary to correct any existing bodily ailment. Marital relations should be interdicted for a period of at least two to three months, and where plastic work upon the vagina has been performed a specular examination should not be made until the parts operated upon have become strong. If, after a reasonable time—two or three months, the condition is not relieved, electricity should be daily used to relieve any remaining congestion of the parts and to give tone to the relaxed ligaments. When necessary, a comfortably fitting pessary may be applied and worn until the uterus has been reduced to its natural limits in size.

Complete Procidentia.—In prolapsus of the second and third degrees where there is a radical deviation in the axis of the organ and the structural changes are so great that the tissues can never be restored to either their natural anatomical form or physiological function, palliative measures are totally ineffectual. Nothing short of radical surgical measures will give satisfactory results. After considerable experience in the management of such cases, which includes the application of many of the various methods recommended by different authors, there are but two that are, in my judgment, worthy of consideration, viz.: Abdominal fixation preceded by amputation of the cervix, and plastic work upon the vagina; or vaginal hysterectomy accompanied with or followed by anterior colporrhaphe and colpo-perineorrhaphy. The age of the patient is largely the governing factor in the choice of the method. In young subjects who suffer from a marked degree of prolapsus, where the elasticity of structures has not been totally impaired, the abdominal operation is chosen. While in old subjects, in whom senile atrophy has taken place, rendering the tissue unfavorable for perfect plastic operative work, vaginal hysterectomy deserves the preference.

The recital of a clinical case in either variety will probably best serve to illustrate the method.

Case 1.—Mrs. A——, aged twenty-four; German; tall and delicate; the mother of two children, the youngest three years old; suffered, since the birth of the last child, from progressive uterine prolapsus. She had, in addition, a marked lateral and antero-posterior curvature of the spine, which greatly added to her discomfort. An examination revealed a bad laceration of the perineum, a distended vagina, and an enlarged and completely prolapsed uterus. The cervix was lacerated and greatly elongated. Both ovaries were cystically enlarged, and both tubes elongated and thickened.

The woman was placed in bed, the prolapsed uterus and vagina replaced and douched with a 1 to 3,000 bichloride solution, after which a wool tampon saturated with an alum and boro-glyceride solution was

applied. This treatment was repeated daily for two weeks; at the end of this time the uterus was found to be much reduced in size and the vaginal structures shrunken.

The patient was now prepared for a vaginal operation, anæsthetized, and placed upon the table. The rectum was first dilated and several large hemorrhoids removed, by the Pratt method. The uterus was then dilated, curetted, and the cervix amputated high up, by the antero-posterior flap method of Schroeder; after which an anterior colporrhaphe, for the correction of the cystocele, was done, after the manner of Hegar, as follows: The vaginal wall in front was seized in its central line by two pairs of Martin's forceps, one near the meatus and the other near the cervix; these were placed in the hands of an assistant and drawn forward so as to put the tissues upon the stretch. With a sharp scalpel, beginning near the cervix uteri, an incision that divided the vaginal mucous membrane and muscle, was carried forward on one side in an oval curve close up to the meatus. A like incision was then made in the same manner on the opposite side, a sufficient amount of tissue being included to take out all the redundancy. Then, with a pair of sharp scissors, the loose cellular tissue which connects the vaginal muscle with the bladder was divided and the flap removed. After which the wound was closed with a number three sheep-gut suture, as follows: Beginning at the meatus, a fine, sharp, curved needle was introduced just inside the edge of the cut surface, so as not to include the mucous membrane, and made to pass straight across the denuded surface, emerging on the opposite side at a like point inside the wound edge. A continuous or running buried suture was carried in this way down to the cervix. Beginning at this point with the same ligature, another row of sutures that took strong hold in the mucous membrane was carried upward to the meatus and the two ends tied. This accurately united the divided edges of the mucous membrane and firmly closed the chasm, making a strong seam in the median line.

The rectocele was next corrected, and the perineum restored by a modification of Doloré's flap splitting colpo-perineorrhaphy, in the following manner: A vaginal flap was dissected up to the upper border of the perineal body; then, with the index finger, the recto-vaginal tissue was separated well up to the cervix, after which a pear-shaped section of the flap corresponding with the perineal body was cut away with the scissors. Then, beginning at the highest point at which the recto-vaginal septum was separated, a needle threaded with a medium-sized sheep-gut suture was entered in the vagina on the left side and made to penetrate the flap, carried across the space, and enter the flap on its under or raw surface, and brought out in the vagina on the right side. It was now again entered on the right side, one-third of an inch nearer the vaginal outlet, again passed across the space, and brought out in the vagina at a like distance (one-third of an inch) from the point of introduction, and tied. A second suture was then introduced in the same manner. This made a heavy ridge in the posterior wall of the vagina and completely obliterated the rectocele. The outer part

of the wound, the perineal body from which the flap had been cut away, was then closed with buried number three sheep-gut sutures, introduced in such a way as to most accurately approximate the parts, after which the vaginal mucous membrane and the skin on the outside was coaptated by a continuous sheep-gut suture of medium size. This completed the plastic work, the entire operation lasting one hour and twenty minutes. The patient was again put to bed and kept there for three weeks, a most perfect result following. At the expiration of this time she was prepared for a laparotomy. The abdomen was opened, the cystically enlarged ovaries and greatly elongated and thickened tubes removed, and the fundus of the uterus fixed to the abdominal walls. The attachment was made high up by rather a broad surface. Recovery was prompt and the results most satisfactory. I examined the patient two years afterward and found the vagina to be, though small, of good contour and the uterus much reduced in size and in perfect position.

The good result in this case is typical of what I have had from many similar operations.

Case 2.—Mrs. W——, aged fifty-seven; a stout German woman, and the mother of six children; consulted me on account of complete prolapsus of the uterus and incontinence of urine, which had existed for several years. An examination revealed a badly lacerated perineum and distended vagina, the tissues having entirely lost their natural elasticity. A large mass, the size of a goose-egg, protruded from the vulva. This hernial mass was found to contain the bladder, uterus, and a cystically enlarged ovary the size of a lemon.

A hysterectomy was advised, to which the patient readily consented. Accordingly, after the necessary preparations, the uterus, ovaries, and tubes were removed by ligatures in one specimen, per vaginum. At the same time a V-shaped section of the anterior vaginal wall, with its apex at the meatus, of sufficient dimensions to include all redundancy, was made, and the chasm closed with two rows (one buried and one superficial), of sheep-gut sutures. The broad ligaments were then drawn down and secured with ligatures on either side in the angle of the vaginal wound, the vaginal wound closed without drainage, and the vagina lightly packed with sterilized gauze. This union of the broad ligaments in the angles of the vagina gives it support, and, as the ligaments contract, causes the vaginal vault to be drawn upward and has a tendency to overcome both the cystocele and rectocele. The recovery of the patient was uneventful. Three weeks later she was again put upon the table; several hemorrhoids removed from the rectum, and a colpoperineorrhaphy performed. Recovery was prompt. An examination made one year after showed the results to be entirely satisfactory. There had been no return of the urinary trouble, nor had there been a reappearance of either the cystocele or rectocele.

This is the method that I have adopted in the treatment of procidentia in old people, and in a number of cases operated upon I have not a failure to record.

When patients with complete procidentia uteri decline to submit to radical measures for relief, the physician has but little to recommend in the way of palliative treatment. In fact, in old women with atrophy and loss of tonicity of the vagina and perineal tissue, there is nothing to offer.

If the vulva is not too patulous and there remains some elasticity of the structures, some form of pessary may be applied, usually the soft rubber ring will answer best. The instrument, however, will frequently escape while on the feet or when straining at stool. In these cases temporary benefit may be derived from the daily use of hot douches, massage, and the application of electricity, all of which tend to improve the tonicity of structures. Wool tampons saturated with some astringent, boro-glyceride solution, snugly packed in about the uterus, will at times, for awhile, be beneficial. Such patients should be instructed to spend much of their time in the recumbent position, and should be taught to replace the womb when lying down. In some cases some form of belt pessary, with a cup attached, in which the cervix rests, or a perineal pad supported from the waist, may be more or less constantly worn. These instruments, however, sooner or later produce abrasions and ulcerations, and must be discarded.

Discussion.

J. Kent Sanders, M.D., Cleveland, O.: The great trouble with the paper before us lies in its excellence, for it leaves hardly any point to pick out for criticism. The only point I think of in connection with the possible causes would be a floating kidney. I have a case under observation where the only possible cause for the prolapsus was a floating kidney. The treatment, of course, included massage and postural treatment, but I think we should not have gotten as good results had we not anchored the floating kidney. As to the treatment, I do not think the doctor made a sufficiently strong point of massage; massage for the pelvis as well as for the balance of the body. Many of these cases are the result of a general under-tone of the muscular system, and vigorous general massage is an excellent adjuvant. In the cases which are not extreme a great deal may be done with postural education, sleeping in a certain position tending to take the pressure off the pelvic organs. In one or two cases, where it has occurred in connection with a general run-down condition of the system, I have found that they generally sleep on one side, with the limbs drawn up and the head high, so there was constant pressure brought on the pelvic organs. Where under the care of a nurse during the night, a change in the habit of sleeping position would help the case. The doctor's position on the Alexander operation will probably lead to the omission of this operation as a possible method of helping these cases of the first variety. I think it deserves mention, as, in some hands, it seems to be successful. I have nothing more to say except additional praise for the very excellent paper.

J. H. McClelland, M.D., Pittsburgh, Pa.: So far as the ground is covered by the paper I believe it is above criticism. I merely wish to say that, as a result of considerable experience, I am doing ventral fixation much more frequently than formerly. I have been led to perform this operation in preference to others because I have generally found prolapsed ovaries in connection with the prolapsed uterus, and I believe that more suffering results from the prolapse of the ovaries than of the uterus. Whenever I find a prolapsed ovary with adhesions in connection with retroversion I do the ventral fixation; I believe I have done this many times in the last year. I do not know that the plan is original, but I merely fix the uterus to the peritoneum, instead of making the suture embrace the entire abdominal wall, using silk sutures, and in this way allowing it some swing. I have examined these cases at intervals afterward, and found perfectly good results. It not only holds the uterus in position, but supports the prolapsed ovaries. As is usual with Dr. Green's papers, I see nothing in this one but good surgery.

Charles E. Walton, M.D., Cincinnati, O.: A discussion of a paper does not mean criticism, and I am very glad that I can find nothing to criticise. I desire to add a little to the general subject before us, not in anticipation of a reply, but to the point just raised by Dr. McClelland as to attaching the uterus to the peritoneum alone. I wish to call attention to a method which I have not tried, but which came to me through an article in one of the journals. I do not even know the name of the operator, but he makes a ribbon from the peritoneum and draws it through a slit in the top of the uterus, thus forming a suspensory ligament. I shall try this at the first opportunity, for it makes provision for suspension and the movement which Dr. McClelland desires.

George F. Shears, M.D., Chicago, Ill.: I would say that the device method of operating referred to by Dr. Walton is the invention of Dr. Franklin Martin, of Chicago, and I have had the pleasure of seeing him perform the operation. He uses for sutures the pyoktanin catgut referred to the other day; it is sterilized in a formaldehyde sterilizer and then boiled in pyoktanin, and makes a good suture. The No. 5 size is said to last several weeks. Dr. Martin uses the No. 3 in operating for fixation of the uterus. He employs either a strip of peritoneum or the remains of the urachus. One noticeable thing in Dr. Green's paper is his universal use of catgut. In view of the great fear of catgut which has been expressed here, it is interesting to note the good results he has had with this suture, even when used in several layers, which always increases the danger of infection. It shows at least that, with proper preparation, there should not be so much fear of catgut, and, as there is no suture material so generally useful, it should not be discarded. I want to commend the paper, and am very glad to have heard of such good results from the use of catgut.

E. S. BAILEY, M.D., Chicago, Ill.: I have only a word in commendation. Dr. Green's papers are always clear, concise, and complete. I wish to call attention to the thoroughness with which all his cases are treated; he evidently makes no bones of telling the patient when a second operation may be necessary, and if the second was not satisfactory he would do another, until he gets the desired results, and I know from outside sources that his results are all that could be desired. The question of uterine displacements is one which very frequently comes up, and, from the surgical stand-point, the uterus is almost always the offending organ. We hear this so often: "First the uterus was attacked, then the surrounding organs were looked after." It is not sufficient merely to replace the uterus; it must be held there, and in so thorough a manner that it will stay until the new arrangement is so complete that it cannot get away out of position and into another pathological position. It is a cure for what is called an incurable disease. As Dr. Shears has said, there has been a wide-spread distrust of catgut, but there is now a tendency to try it again because it is the ideal suture material. Carefully approximate the tissues intended to heal, readjust the organs which are out of place, and make the tissue itself the only support.

J. J. THOMPSON, M.D., Chicago, Ill.: It seems to me that not enough stress has been laid upon the prophylactic treatment of procidentia. I believe that in every case we have one of two conditions—an abnormally heavy uterus, or an abnormally weak support, or both. Now, as a rule, these come from some traumatism, or from labor. If the conditions were immediately corrected we should hardly ever see a case of procidentia. If the uterus does not return to normal conditions after labor, it is a heavy, dragging weight, pulling itself down and the other pelvic organs along with it. If it is from a submucous laceration, it should have been repaired at once, and there would have been no prolapsus. But many cases come to us so long after the original injury that the parts have lost their tonicity, and a plastic operation is necessary. In every case of labor the physician should carefully examine the parts at once, and if there is injury, whether actual or submucous laceration, it should be made good as soon as possible. I do not believe there is much necessity for the Alexander operation; I have never seen a case where I deemed it necessary, and I have seen so many poor results of the operation at the hands of others that I have become discouraged. I have not heard one word said about the medical treatment of these cases, yet we all know that after any surgical treatment there remains a condition which nothing but the indicated remedy will overcome. In the beginning of these conditions oftentimes the remedy will do the most good.

R. LUDLAM, M.D., Chicago, Ill.: I regard this as a very important topic, and was much pleased with Dr. Green's paper. The contrast between that and the reports we used to have on the same and similar sub-

jects a few years ago is very marked, and gives the best sort of evidence of progress. I am proud of it, and glad to have lived to see such papers printed in our TRANSACTIONS. I can now die in peace, seeing that we are not away back in the woods, curing everything with dilutions and triturations, however valuable they may be. I do not desire to make a point against therapeutics at all, but to add additional resources from our additional experience. We are getting enough specialists, men of capacity, to stand up and do us honor wherever they go. The doctor has done well to call attention to the various causes of uterine prolapse. When you get such a variety of causes, and reflect that a woman with a slight degree of prolapsus does not consider herself ill, and goes on for years before applying to a physician, you can realize that complications have arisen in the meanwhile, and that no one kind of treatment will suffice for all cases. A great variety of resources are required, and they have been developed by the modern gynecologist until they are innumerable. Too much has been claimed for some of them, and some have been proven failures. We need many resources, and the thing to do is to apply the right remedy, be it medical or surgical. The physician should select the proper treatment and apply it, and not be tied to single fads or operations. There will sometimes be justification for second operations, for no one operation will suit all cases.

If you apply hysterorrhaphy indiscriminately you will make a mistake. It is thirty years since the operation was first done, and the operator took the ovary and removed it, and then made a hysterorrhaphy. I wish to say in connection with the remarks of Dr. McClelland that he will fail sometimes if he keeps on; if the ovary is enlarged it will not suffice merely to put the uterus in position. If there is any enlargement of an ovary it should be taken out before the hysterorrhaphy is made. As to the Martin operation, it seems to me that the women will not run very much after that kind of a ribbon. There are conditions and complications; do not depend too much upon any one procedure. Cases become chronic before we see them, and no one operation is adapted to all. As Dr. Green says, we may have to operate and operate again.

J. C. WOOD, M.D., Cleveland, O.: As to the etiology of prolapsus: It is a fact that all cases of complete procidentia must be preceded by a retro-displacement; it is impossible to have complete procidentia without having a retro-displacement. This brings up a practical point in relation to ventral fixation; if we make simply a peritoneal attachment there may follow such a stretching of the tissue that the condition will become as bad as before the operation. To make the operation successful the stitch, or stitches, should be passed through the posterior surface of the uterus so as to tip it forward in such a way as to cause the intra-abdominal pressure to be exerted upon the posterior uterine surface. I had occasion some time ago to remove a suspended uterus, and found its attachment had stretched until it was six inches in length. It was not a proper case for fixation anyway, as there were several small

fibroids of the uterus. Fixation should be limited largely to those cases where the appendages are so diseased as to warrant their removal at the same time. Where the ovaries are left behind there is apt to be trouble in subsequent pregnancies. I opened an abdomen several weeks ago, where the uterus had been suspended by the round ligaments and one ovary left behind, which I had to remove. The uterus I found beautifully suspended by the round ligaments, and in excellent position. In hysterectomy, for complete procidentia take care not to injure the ureters, which are displaced with the bladder and uterus. My plan is to work close to the uterus, amputate the ligaments high up and bring them into the vaginal wound, where they are fixed.

Dr. Green: In closing the discussion I have but a few words to say. The therapeutic treatment of prolapsus was purposely omitted, as most of the members know more of that than I do. I am in the habit of using massage and all the other adjuvants referred to. As to floating kidney I do not know that I ever saw anything mentioned in the books in regard to it, and I have never seen a case of prolapsus superinduced by this pathological condition. In regard to the Alexander operation it may be applicable where there is retroversion with slight enlargement, but, as has been said, we usually have in these cases an enlarged uterus and a diseased condition of the ovaries and tubes, with a weakening and an elongation of the uterine ligament. If you shorten the ligaments by this method, the weight of the uterus, which they have to sustain, will simply stretch them again, and the condition will reappear. In doing ventro fixation, it is better not to include the fascia in the ligatures, for by so doing the attachment will be made too firm, as a certain amount of mobility should follow the operation, otherwise the patient will suffer more or less pain, after undue exercise, lifting, or any other strain upon the body; this pain and soreness may continue for days after; therefore, a suspension and not a fixation should be done. There are cases, however, where a firm attachment should be made, when the uterus is unusually large, and the neck requires amputation. In such cases the uterus must be fastened high up and a firm broad attachment made. In placing the ligatures they must be passed through the posterior lamella of fascia, or even through the muscle itself, so as to make the attachment strong.

In regard to the question of catgut ligatures, I would say that I have had a large experience with them. I use them in almost all of my operations with the utmost confidence. I have a preference for different ligatures in different parts of the body. When we operate upon the uterus and vagina, we are dealing with tissues which have a liberal blood-supply, therefore germ infection will be greatly resisted, union takes place promptly, and catgut answers better here than any other material. In performing fixation I use kangaroo tendon or the chromicized catgut. I prefer this to either silk or silkworm, as it is absorbable, and is taken care of by the tissue.

Backward Displacements of the Uterus.

By O. S. Runnels, A.M., M.D., Indianapolis, Ind.

Retroversion of the uterus implies permanent dislocation backward with the axis of the body and the axis of the cervix essentially identical. Retroflexion denotes the permanent backward dislocation of the fundus, the cervix remaining *in situ* or participating in retroversion, the axes of the two parts forming an angle. In rare combinations retroversion with anteflexion, or anteversion with retroflexion, may coexist. The degree of backward dislocation is always a matter of relativity, and with the woman in the upright position is greater as the uterine axis approaches the horizontal. Retroversion and retroflexion have intimate relationship, the former being a transitory condition originating the latter. It must not be understood that every retroflexion has retroversion as an antecedent, but that it is very frequently the case, and that the two conditions have common causation. Practically, they are found to coexist in many cases and must receive conjoint consideration. Whether it be retroversion, retroflexion, or retroversio-flexio, matters little so far as etiology and principles of treatment are concerned.

Uterine position has wide latitude within normal limits. Situated between organs subject to distention and collapse, the uterus may be pushed forward or backward through a space of several inches as the frequent daily needs require. It may rise and fall to an equal or greater extent, as is shown by sneezing, tenesmus, the genupectoral position, and respiration. Its lateral mobility, while not so great, is yet marked, and rotary motion is in some degree possible. Having no solid foundation upon which to rest, and being suspended in mid-pelvis by guy-ropes and attachments more or less elastic, it may disport itself as a trapeze performer in executing any movement within its physical capabilities. Whether it rise or fall, lie prone or decubitus, traverse with its fundus an antero-posterior arc of sixty degrees, or make obeisance in its flexions to any point of the compass, is of small consequence so long as it shows its ability to regain and maintain itself. The positions assumed may be regarded even as anomalous, but so long as the uterus is able to return spontaneously to its normal position after the transient cause of the deviation has ceased to operate, it cannot be charged with displacement.

Uterine displacement cannot be diagnosed in the clinical sense until the deviation from the normal has become more or less stable. There must be limitation of automatic movement, prolonged departure from

normal position, and inability to maintain that position when regained, to fulfil the requirement. In displacement, passive movement may be in no sense circumscribed, the uterus may even remain abnormally movable, but active and independent exercise is more or less suspended, self-adjustment is impeded, and normal ability thwarted.

Uterine displacement, therefore, implies the embarrassment or obstruction of definite normal movement and the suspension, in part or whole, of normal ability. The play of forces incident to normal exercise has been disturbed and the equipoise lost. Natural prowess no longer obtains, an enervated and toneless organ is encountered, and forces rule that dominate all passive bodies—I mean particularly the force of gravity. Especially is this true of all backward displacements of the uterus, inasmuch as the consideration must embrace not only the weight of the helpless decubitus uterus, but the superimposed bowels pressing down upon its anterior surface, instead of forward upon its dorsum, as in the normal position.

Backward displacement may be evoked primarily by any cause which may induce intensification of intra-abdominal pressure. Lifting a heavy object, violent vomiting, prolonged coughing, a blow on the abdomen, or a fall in which the sacrum receives the impact may serve as the initial. Even an habitually distended bladder may impinge upon the uterus so continuously as to engender permanent displacement. But, while incidents of this character may serve as direct cause, there is in each instance a predisposing cause or antecedent condition of the system that must be regarded as part of the problem. Incidents capable of serving as the cause direct are of daily occurrence in the life of every woman, but it is only in cases of enfeebled or crippled vitality that they prove effective. When the life-forces are regnant, uterine ligaments—contractile tissues—like the drawn bow of the archer, spring back the moment the pull is relinquished, obliterating all evidences of displacement. It is only in cases of malnutrition and enfeeblement that elasticity is impaired, that power to regain the erect is wanting, and that the uterus continues to lie after it has fallen.

It is clear that a comprehensive grasp of the subject cannot be gained without considering the antecedent factors potent in the production of this anomaly. Rigid induction has disproven the opinion held for a long time by most gynecologists that the predisposing causes of retro-displacements in the majority of instances were chargeable to puerperal experiences; that, inasmuch as most victims of the misfortune are found among those who have borne children, the causation was, therefore, due to some malperformance during the puerperal state. Careful clinical study has shown that while the larger quota of such patients are thus found among post-parturients, the pelvic weakness and liability to displacement, if not the displacement itself, was in evidence before the first pregnancy, and the deviation was established or re-established in the puerperium because the uterine attachments were in the beginning relaxed.

This is in accordance with the observation of Küstner, that uterine

displacements, or the tendencies thereto, "have been carried over into the sexual life from the time of puberty and puerility," and proves that errors of development underlie most, if not all, of the cases, and that malnutrition is the universal factor. While the argument in no sense belittles the agency and importance of the puerperal factor, it justly emphasizes the necessity for the early and full development of the female sexual organs. The partial or complete arrest of the development of the uterus and adnexa is present in our day to a most surprising extent. The number of girls who reach the age of twenty with sexual organs in an infantile or dwarfed state is alarmingly great. Whether this be due, in our cramming educational process, to the diversion of the nutrient blood-supply from the pelvic organs to a precociously developed brain; to the metastatic influences of zymotic diseases during puberty; or to indiscretions due to ignorance or wilful disregard of menstrual demands, I cannot now discuss. I note the fact as a reason for more rigid censorship over those girls especially who are contemplating marriage, and over all who in any way manifest sexual embarrassment or inability, or who give evidences of sympathetic disturbances. Enlightened thought on this subject demands that all girls shall be freed from the handicap of sexual non-development before marriage is entered upon and whenever embarrassed functional evidences are announced. Motherhood should never be essayed by one possessed of organs wholly incapable of completing the act without extra hazard or catastrophe. Uteri and uterine attachments which ceased to grow at the age of thirteen or thereabouts should not be allowed to attempt the responsibilities which are safely and easily discharged by organs of full maturity. To this effect there must be a recast of views upon the subject of early physical examination in all such cases. Invalid and markedly undeveloped girls must undergo the rigid scrutiny demanded in all such instances. They must be the recipients of such remedial help as is afforded by the gynecological resources now developed. Their sexual inefficiency must be supplanted by that vigor and tone which is the birthright of everyone, and without which capability and the creditable discharge of normal function is an impossibility.

I have purposely dwelt upon this phase of the subject because I consider it to be the chief factor in the remedy of all uterine displacements. I mean, 1, that the establishment and possession of such vigorous organic ability would be an effectual bar to the development and continuance of such forms of incompetency before the advent of child-bearing; 2, that it would insure freedom from most of the perils of parturition evidenced by the well-known train of sequelæ; and, 3, that no cure of uterine malposition can be attained without regainment of normal vitality—both local and general. Wisely directed treatment, therefore, must, in the first place, anticipate the effects of the force of gravity upon a helpless organ by insuring the proper development of that organ; it must, by prophylaxis, hedge against the possibility of uterine and adnexal disability; it must see to it that

every woman is possessed of her full complement of life-energy, both local and general. I say the work of the gynecologist properly begins before the announcement of uterine instability, and is, ideally, of the order of prevention rather than patchwork.

Unfortunately, this wise exercise of our knowledge is too rarely permitted. The faulty practice now is to wait till the weakness is engendered; to withhold help till malposition has become stable. It is the up-hill work of reform; it is the regainment and re-establishment of energy lost that is, for the most part, called for in these days.

Coming from the abstract to the concrete, let us enter the clinical arena and deal with conditions rather than theories. Here is a girl under twenty years of age, who is complaining of menstrual irregularities. The menstrual discharge is wanting, is too scanty or profuse, or is voided with great pain. She is perhaps constipated, a poor eater, and has bad digestion. She has neurasthenia and faints away with or without provocation. She may be a consumer of slate-pencils, chalk, plaster, or other earthy matter, and is more or less incompetent mentally as well as physically. A reasonable course of medication, calisthenics, reform of school duties, and perhaps residence in health resorts, has been tried without permanent benefit. Before much time is squandered in fruitless effort of this kind she should be anæsthetized and examination made of her clitoris, vagina, uterus, ovaries, and rectum. Clitoral adhesions should be broken up, stenoses of sphincters overcome, papillæ of urethra, vagina, or rectum removed, as well as every other occasion of sympathetic irritation. The diminutive uterus —displaced or not—must have rapid and thorough dilatation, the endometrium freed from all traces of vegetation, and the uterine muscle aroused from its dormancy by the induction of "mock labor." This should be accomplished by means of uterine packing with aseptic gauze continued through several hours or until nature makes protest in a slight rise of temperature, say from one to three degrees. The object accomplished by this latter step is the quickened and enlarged circulation of uterine vessels and a consequent better nutrient blood-supply to the starved part. Of course, the treatment by divulsion and packing must be dependent upon the absence of acute inflammatory conditions in uterus and adnexa, as well as all other contra-indications. But her sexual forces must be freed from all thraldom, and aroused to energy by methods stimulating the normal and mature exercise. I say such an embarrassed girl should never be allowed to reach conception or be forced to acquire uterine development after a possible impregnation.

It is remarkable how responsive nature is to such effort, particularly through the first half of the child-bearing cycle. Development or growth of retarded female sexual organs is attainable in most cases at any age under thirty years, and while increase to normal standards at a later period is more problematical or wholly impossible, the removal of all occasion of sympathetic irritability is followed by such physical calm as is compatible with good health.

Whenever retro-displacements have been acquired in the nulliparous state regardless of age, the foregoing régime is applicable, subject always to such modifications as may be indicated by the morbid conditions present in the given case. Inflammations within and around the uterus should be overcome, resultant adhesions absorbed or loosened up, and tubal or ovarian degenerations ruled out before the employment of the radical measures here outlined. It must be remembered that a long decline of vital energy may have preceded the effort at cure; that uterine ligaments may have been under tension in such degree and for such time as to have acquired undue length and wholly to have lost elastic tone, and that a long-directed effort may be called for in the reacquirement of health conditions. To this end there must be persistent employment of the properly selected internal remedy; the uterus must be kept in right position for a sufficient time by wool tampon or other properly adjusted mechanical support, and every adjuvant utilized that will favor this accomplishment. Even then it may be ascertained that the elastic tone is irreclaimable, the ligaments and connective tissues are persistently lax and elongated, and that surgical shortening may be necessary.

Whenever retro-displacement has been acquired by the woman after parturition, the requirements of treatment are in many respects identical with those found necessary with the nulliparous, but may have in addition many new features. While the development of the puerile uterus may have been accomplished in a measure by means of gestation, the parturient act has been inadequately performed and extensions and additional burdens have been imposed upon the state of pre-existent weakness. Cervical laceration, retained placental fragment, or endometritis may have thwarted the performance of involution, and subinvolution of the uterus and its ligaments may have remained. In addition, the vaginal and perineal supports may have been weakened or swept away by rupture, thus obliterating all the restraint and sustained force of the pelvic floor. Under such circumstances the abnormally heavy uterus, inadequately tethered by its lax and subinvoluted ligaments like a top-heavy balloon, falls helpless and enters upon its course of descent, prolapse is next in order, and full procidentia a matter only of time. It is good fortune, indeed, if, in all this embarrassment, sepsis has not been superimposed and the ravages of inflammation are not an additional complication; or, if the cell-life of uterus or ovaries has not been diverted in its embarrassed activity into the evolution of cyst or fibroid, or other exhibition of hampered life exercise. In any event, successful treatment is dependent upon the fullest comprehension of the facts and probable employment of a wide range of remedial measures. The sole object being to establish or re-establish normal life ability, all factors acting as a hindrance to this accomplishment must have abatement. Subinvolution, cicatrices, broken vaginal or perineal supports, perimetric or adnexal adhesions, and all adnexal degenerations must be proven not to exist, if stability of normal uterine position is to be maintained.

Coincident with all this, and of equal import with it in the etiological process, is the rectal factor. All gynecology must be a failure in greater or less degree that does not comprehend rectal pathology. Uterine morbidity, almost without exception, is attended by rectal morbidity. They go hand in hand, always a pair of them, and the ability to exhaust the general life-force and make the individual affected a physical bankrupt is as pronounced in the one case as in the other, and very effective when working together. It is sympathetic nervous irritation in both cases, and the phenomena are identical so far as expression and significance are concerned.

From personal observation I am convinced that rectal morbidity is the leader of the procession in point of time; that it may, and usually does, originate in babyhood or early childhood, and that its enervating effects are operative long before the first impulses to quickened life are perceptible in the female sexual organs. Consequently, I do not hesitate to believe that rectal morbidity plays a very large part in the causation of sexual non-development as well as in the production and continuation of the neurasthenia so pronounced in every gynecological case.

But, after all has been done to rectify retro-displacements of the uterus that the nutritional problem can suggest, many persistent and wholly intractable cases will remain. The normal tone of uterine muscle and ligaments in such cases is irreclaimable by any and every kind of procedure. The uterus persists in resuming the decubitus whenever external support is withdrawn; or protests with pain and intolerance to the employment of any mechanical device or scaffolding designed for its support. These are the cases that have tested the resources of gynecology to the utmost limit and have defied successful treatment till times the most recent.

To meet such emergency, the operations of Alexander and Schroeder were introduced. In the one case the slack of the ligaments is overcome by the excision of enough of the ligaments to make them sufficiently short; in the other, the utility of the ligaments is disregarded by making the fundus uteri fast to the anterior abdominal wall. It is almost a double decade since the introduction of these measures to the profession, and from that day to this experiences have been ripening with great rapidity. Some advocate almost the exclusive use of the one or the other procedure, but the consensus of opinion is to the effect that each operation has a definite field not encroaching upon the other, and that they can be combined to advantage as occasion demands. Alexander's operation consists in opening the inguinal canal on either side of the pubes, picking up the round ligaments of the uterus, drawing them out as far as they will come readily, cutting off the surplus, and fixing the ligamentary stumps in the inguinal canal. By this procedure the fundus uteri is approximated more or less to the anterior abdominal wall; the uterine body is lifted out of the pelvis and the retro-displacement is converted into anteversion. This operation is applicable only when absolute mobility of the uterus and

appendages is assured, and when the latter are in an entirely healthy condition. Many operators have experienced great difficulty in being able always to find the round ligaments, and it has been proven that these ligaments are in anatomical fault sometimes in making deflections in their attachments to Poupart's ligament or other tissue, rather than to the inguinal ring. In other instances the ligaments have proven too frail to bear the pull made upon them, and have broken, thus defeating the endeavor, while in yet other instances hernia has been left as a legacy of bad technique. The great merit of the operation consists in the simplicity of its performance in the average case, and in the avoidance of entering the peritoneal cavity. The results in properly selected cases are most gratifying, the uterus retaining its regained position with greater tenacity than antecedently, or than under average conditions, and this notwithstanding the effects of following pregnancies. The field of this operation, however, as originally proposed, is greatly circumscribed by the fact that retro-deviations without adnexal lesions are rare, and that the correction of the former without overcoming the latter is sure to end in dissatisfaction to all. It has been proven that apparent mobility of a uterus retro-displaced does not disprove the presence of embarrassing adhesions when the uterus is carried forward, and that such mobility does not imply freedom from adnexal disease. Persistent painful retro-deviation proves at once the existence of limited mobility as well as adnexal disease. Ovarian prolapse and ovarian degeneration have long been regarded as synonymous terms, the chronically prolapsed ovary being invariably degenerate.

Inasmuch, therefore, as the reposition of the uterus without removal also of the adnexal lesion is followed so frequently by incomplete cure, open exploration of the pelvic cavity is often necessary. After the manual liberation of adhesions and the reclamation of diseased appendages by conservative surgery, or their ablation if degenerate beyond redemption, the uterus, by the ventral operation, is fixed to the abdominal wall by permanent sutures. The manifest advantage of this operation consists in the acquirement of exact knowledge concerning the intra-pelvic condition by ocular demonstration and the opportunity to deal with the abnormality present as the conditions demand. The object of the operation is not merely to secure the adhesion of the fundus to the abdominal wall, but to see to it that all conditions capable of aborting the success of the procedure are overcome. The success attending ventro-fixation, hysterorrhaphy, or hysteropexy, as the operation of Schroeder is indiscriminately called, has been of a very high order. Under certain contingencies, ventro-fixation cannot be supplanted by any other procedure. The objections, however, to the operation are: that it involves the performance of cœliotomy and the dangers incident thereto; that the fixation thus made of the uterine fundus is an embarrassment in case of pregnancy, abortion thereafter being a frequent result, and that the aperture left by the operation between uterus and bladder is another opportunity for

intestinal strangulation. While the validity of the first objection has been robbed almost of its force by the perfection of surgical technique, it cannot be denied that pregnancy has suffered interruption by the enforced impairment of uterine mobility, and that wayward intestines have migrated through and been caught in the foramen of Schroeder. For these reasons the trend of opinion is away from the practice of uterine immobilization, especially during possibility of child-bearing; or, at best, that it must be, under such conditions, an operation of second choice.

Modifications of the Alexander operation have been made that overcome the objections to its employment in the exceptional cases as follows: After abdominal section and the removal of adhesions and the correction of adnexal abnormalities, the round ligaments are shortened by doubling each upon itself and stitching it thus doubled to the anterior wall of the abdomen or uterus. The resultant adhesions, while insuring permanent shortening, add greatly to the strength of the ligaments and the permanency of the results. In case of rupture of the ligament in the primary method of Alexander, or the inability of the operator to find the ligaments, the suprapubic route and the intrapelvic method of shortening is justifiable.

In greater favor, however, is the approach to the pelvic peritoneum by way of vaginal section. The ease with which adhesions can be broken up, and the success attending minor surgery of adnexa through vaginal section makes the latter the route of election in perhaps the majority of instances. Opening is made into the peritoneum either through the vesico-uterine fold or the recto-uterine fold, and ample proof gained as to the exact conditions. Existent adhesions can be broken up; morbid or wholly degenerate adnexa can be patched or removed, and frequently the round ligaments can be doubled upon themselves as before described, leaving nothing to be remedied. Or, if ligamentary shortening be not thus satisfactorily attainable per vaginam, the hindrances to the successful performance of an original Alexander's can be removed. The minimum risk to the patient thus gained, together with the feasibility and success of the procedure in a very large percentage of the cases in which Alexander's operation would otherwise be excluded, make the latter, as amended, the operation most widely applicable at the present time.

The endeavors to secure anteflexion in retro-displacements by means of various operations to secure wider and firmer utero-vesical attachment have proven impracticable, and therefore unpopular. Of this order was the operation of Schücking, which consisted in entering the peritoneal cavity between uterus and bladder, carrying a silk thread through the uterine canal and fundus and back through the peritoneal opening into the vagina, and then tying the ends of the thread so as to enforce anteflexion till the formation of adhesions. Mackenrodt's operation is based on a similar mechanical principle, but differs in its execution. Opening is made to the peritoneum through the anterior vaginal pouch—as in Schücking's operation—the bladder pushed up; the fun-

dus brought down into the aperture made by the section and held there by strong stitches passed through the vaginal walls. In both operations an immobilized anteflexed uterus is substituted for a uterus having backward displacement, but more or less mobility. It has been proven to be ventrofixation by another route, and has occasioned abortion to pregnancy in like manner.

Yet other conditions may be present that will not be remedied by any of the foregoing procedures. Tears in the tissues of the fundus uteri during parturition amounting almost to rupture of that organ may be followed by cicatrices of equal importance to the more common expressions of that kind in the cervix; diminutive multiple fibroids may so occupy the uterine body as to defy successful conservative removal; or the retro-deviation may prove to be an incident merely with the companion problem of procidentia. In all such cases uterine ablation may be the shortest road to cure—may be, in fact, the only road to cure. An irremediable or degenerate uterus, either before or after climaxis, is without efficiency from any stand-point of observation. Its day of usefulness being wholly past, its retention should not be tolerated, or certainly should not depend upon reasons of mere sentiment.

So long as uterine efficiency is reclaimable, effort should continue in the hope of attaining the desired result; but when failure has attended the fullest exhibition of gynecological resource and a hypersensitive and hopelessly involved uterus acts as a drag upon the woman's existence, there should be no hesitation about its amputation.

To recapitulate: Retroversion with allied conditions is dependent upon non-development primarily, and malnutrition secondarily, of the pelvic sexual organs, and is resultant from a more or less prolonged decline of local and general vitality. The onset of this decline and waste of vitality is due to causes which may be grouped in two grand divisions: 1st, those operative antecedently to, and in conjunction with, physical development, and 2d, those operative at the time of, and subsequent to, parturition. This classification, however, is purely arbitrary, and must not obscure the basal fact in any case that malnutrition of uterus and adnexa is the gist of the whole matter. This is but another way of saying that, inasmuch as the uterus with its adnexa is but an intimate part of an organic union, the malnutrition must be general as well as special, and may be general before it is special. Whether, however, it is first general and then special, or *vice versa,* does not change the requisition that malnutrition must be banished and normal conditions of life be established. The hungry child must be fed; good blood in sufficient quantity—facilities of growth to full stature—must be provided and the incubus of non-development banished in the local sense as well as in the general. In any event, the essay of maternity should not be made except with organs mature and capable.

If, however, such blunder has been made and a train of parturient sequelæ results, the effort to banish malnutrition must still go on; the

aim to remove the incubi to a vigorous blood circulation and to re-establish the tone of good health is still pressing. Polychrest remedies, both medical and surgical, may be called for, and time almost without limit demanded in the acquisition. Even then failure to establish or restore never possessed or lost energy may result, and the ablation of organs, that menace life, that render health acquirement impossible, and that are, in fact, wholly worthless, may be demanded.

After years of patient endeavor to solve the problems of backward displacements of the uterus, I am convinced that the aggregate of gynecological knowledge may be required to solve the problem in special cases, and that the gynecologist capable of dealing with the many formulas presented is by that sign master of his art.

Discussion.

William A. Forster, M.D., Kansas City, Mo.: Owing to the fact that I was initiated last night into the mysteries of Aksarben, I have not read the paper; I am thankful, however, to have heard it. I have enjoyed hearing it read; it is scholarly and thorough, and I hardly know what to add to it. There are a few points which might have been brought out more strongly, and with which we might disagree. As a causative factor of displacement we have nervous trouble—neurasthenia. If of nervous origin why not go to the root of the trouble; treat the nervous system, and cure displacements in that way? If we have other causes, such as traumatism, parturition, or fibroid growths, let us treat them. But among causative factors we often find none of the foregoing, but others which we may overcome by the homœopathic remedies. There are two classes of physicians; one which can cure everything with the remedies and which considers nothing as surgical, and another which cures everything with the knife alone. Some Homœopaths do not care anything for the name of the disease if they only have the symptoms; they say they do not name their babies until they are born. As good surgeons and physicians we should search deeply, study pathology, learn diagnosis, and know what we are about. Prescribe on symptoms alone, and you will prescribe for the knee in hip-joint disease; prescribe for cancer of the stomach when there is a ventral hernia. I have had a good deal of experience in uterine displacements, and we find one causative factor in the high-school system. I have been for some years the physician to an educational institution, averaging an attendance of fifty young women busy with their studies. You would be surprised to know how many of them miss their menses for months at a time, owing to the development of the mental at the expense of the physical, and this in turn gives rise to congestion, followed by displacement. We should change their vocations, give them out-door exercise, change of diet, and stop their running up and down stairs. They run up to the top story when they ought to be out of school; they should not be allowed to take such exercise at puberty. As to the examination of immature girls, it always makes me feel bad to have to

examine a young girl, and I make it a rule to do so by external manipulation or through the rectum, rather than rupture the hymen. This indiscriminate examination of growing girls is a crime. We find some physicians examining every woman who comes into the office, taking a great big speculum and giving local treatments two, three, or four times a week. Don't make indiscriminate examinations of young girls. Many other conditions may simulate retro-displacement; maybe a posterior fibroid may simulate retroflexion. The sound is a dangerous weapon unless the uterus be thoroughly dilated first. Often these conditions are due to a relaxation of the muscular system, and massage, electricity, and the homœopathic remedy will do much excellent work. I abominate pessaries and props; give the patient exercise and Delsarte, and let her develop herself. In ventral fixation I always scarify the uterus, and stitch it thoroughly to the abdominal wall down opposite the round ligament, in order that it may develop in case of subsequent pregnancy. The peritoneum is unstable, so stitch clear through the muscular tissue. Always use an absorbable suture or one you can afterward remove. I have had the pleasure of attending three of these cases in subsequent confinements, and in no case have I seen a return of the old trouble. I operated upon a lady for appendicitis, for whom I had performed a ventral fixation two years before, and found a good strong ligament; since then she has had no return of the former headaches, backaches, etc.

H. F. Biggar, M.D., Cleveland, O.: At the present time there are forty-five different surgical operations for the restoration of the backward displaced uterus. I believe the round ligament operation is the best; it will be followed by more satisfactory results, not at the symphysis pubis after the method of Alexander, but at the uterine end after the method of Werthiem. Open up between the bladder and uterus, anterior colporrhaphe, pull the uterus out and loop, if necessary, each of the round ligaments, and stitch the round ligaments thus attached to the anterior surface of the uterus. This operation is now on trial,—so far the results are very good. There is an objection to ventral fixation or the suspension method, owing to the liability of interference with the intestines. Fixation should never be performed if there is any likelihood of maternity.

L. L. Danforth, M.D., New York City: I would like to say a few words on this important subject, viz., the existence of uterine disease in young women and girls. One of the speakers decried the indiscriminate examination of this class of patients. I think the use of the word indiscriminate in this connection is ill-advised and somewhat misleading. No right-minded physician would suggest an examination of a young woman unless there were very positive indications for so doing. Certainly the indiscriminate examination of these patients would be most reprehensible. But if after failure of medicines, hygiene, and general measures the symptoms persist, or if in the beginning the con-

ditions are such as to lead to the probable diagnosis of, say, a marked displacement, then an examination should unhesitatingly be made. No motives of false modesty should prevent the patient from having all the benefits that the best directed efforts can give her. If the proposition for an examination be made in the proper manner, and carried out with consideration and gentleness, the patient will ordinarily submit graciously, and finally express gratitude for the relief which the treatment has given her. It may often be necessary to employ an anæsthetic in very sensitive patients, or where pain is likely to be severe. An examination by the rectum will usually reveal quite as much as can be learned by an examination per vaginam, and has much to recommend it in this class of cases. I recall many instances in my private practice where neglect to examine would have resulted in utter failure to relieve, because the conditions were such that remedies alone could not have been expected to cure, or hardly palliate. When necessary, therefore, and only then, examine in the proper way, that the sufferer may obtain all the relief she is entitled to at our hands.

C. T. Hood, M.D., Chicago, Ill.: I think that not enough stress has been laid on the matter of the care of the bowels in these cases. Before a young woman should be made the subject of surgical work, every organ of the body should be put in good condition. In many cases these symptoms are the result of auto-intoxication. By seeing that the bowels are acting freely, and by clearing out the material which has laid for many months, we shall relieve many uterine symptoms without surgical interference. In the after-treatment of the plastic cases great care should be given to the bowels. Both the writer of the paper and some of the speakers have referred to the use of electricity in these conditions; too much cannot be said as to the careful, painstaking, and thorough application in these cases. No electrode should ever go into the uterus without being thoroughly disinfected; carelessness here means sepsis. Many brilliant operations for surgical curettement have been spoiled by the carelessness of the operator in using a dirty electrode, and setting up the same condition he was trying to get rid of. Many physicians will use the faradic current in the uterus where there is a cystic condition of the ovary or a condition of salpingitis. That is the very worst thing you can do; it is not to be used in acute inflammatory conditions. As to the use of the positive pole in the vagina, if I used it there at all, I should protect it; I never use a sponge electrode there at all.

J. H. McClelland, M.D., Pittsburg, Pa.: In this admirable paper by an admirable writer it seems to me that Dr. Runnels has, without sufficient qualification, advised the use of mechanical measures in undeveloped girls. I believe there are other means, medical and hygienic. I do not believe it is necessary to stuff the uterus that is undeveloped with gauze for the purpose of bringing about growth, especially to the

extent of causing a rise of temperature. I do not believe it is good practice.

S. P. HEDGES, M.D., Chicago, Ill.: I agree with Dr. McClelland on this point. For hastening the development of young girls, instead of uterine packing we can use gymnastics, hygienic work, calisthenics, which will bring out muscles which they never dreamed they had. Let them exercise with certain movements of the feet while lying on the floor. A good masseur will do wonders in these cases.

J. C. WOOD, M.D., Cleveland, O.: I do not understand that Dr. Runnels would dilate in these cases for the simple purpose of stimulation, unless there was obstructive dysmenorrhea. Personally, if I had a temperature of more than one-half of one degree following divulsion, I should think there was something wrong.

W. E. GREEN, M.D., Little Rock, Ark.: In speaking of uterine packing I think Dr. Reynolds has been unfortunate in using a bad term. The object in packing is simply to stimulate nutrition, promote vascularity, and bring about increased growth of the organs. I do not think that the idea was to direct the attention of the patient to these parts.

I use packing with a great deal of caution, as harm may often come from it. When leaving the patient, after the operation has been done, I always give the nurse instructions to remove the packing at once if there be a rise of temperature, or it is followed by severe pain. If the elevation of temperature is caused by sepsis, it may result in serious trouble; you cannot always tell where it will stop; it may pass out through the tubes, infecting the abdomen, and we will have serious trouble on our hands in a short time. In some cases, however, the rise in temperature may be partly of a nervous origin, and little harm will come of it.

REPORT

OF THE

SECTION IN PEDOLOGY.

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Nutrition.

SECTIONAL ADDRESS BY JOSEPH PETTEE COBB, M.D., CHAIRMAN.

In selecting nutrition and the disorders dependent in part upon faulty nutrition as the subject to be presented by this Section, it has not been my expectation that anything new or wonderful would be evolved from this meeting; on the contrary, the subject was selected because it is one concerning which a great deal of exact information is at our hand; because by a proper and timely use of such information we can avert the larger part of ailments from which children suffer, and because a large part of the profession seem to have overlooked the

importance of this subject in their admiration and study of the wonderful advances in surgery and pathology.

Nutrition or assimilation, in a wide sense of the word, is probably the most universal and characteristic property of animal existence. By this term we designate that series of changes through which dead matter is received into the structure of living substance. The term in its broadest sense may be used to cover the subsidiary processes of digestion, respiration, absorption, and excretion, through which food-material and oxygen are prepared for living molecules, and waste products of activity are removed from the organism.

It is necessary that the animal body should be supplied with food in order that its natural functions may go on without interruption; the waste of tissues by reason of work must be repaired; potential energy must be stored up to provide for the various kinds of tissue work, viz., motion, heat production, nerve force, and metabolic activities. All of these purposes must be effected without undue waste, without unduly increasing the output, and without unduly taxing the constructive machinery.

That the study and proper regulation of the food to supply nutrition in the most favorable manner for these various purposes in adult life is important, cannot be questioned. That it often means to the infant and child its possibility of existence and always its future capabilities is not so universally appreciated.

The average weight of a babe at birth is approximately seven pounds; the baby who develops only at the average rate must double this weight in four months, and must treble this weight in twelve months. This increased weight, startling as it is when compared with any relative growths in the adult, does not mean simply adding adipose tissue and storing up fuel for consumption. It means development of new tissues, reorganization of embryonic tissues, and the development of organs for new functions.

At birth the small intestine is only nine feet and five inches long, while during the first two months it adds about four feet to its length. The capacity of the child's stomach at birth is but a single ounce, during the first year of life this capacity is normally increased from eight to ten fold.

In the central nervous system the tissue has, to a large extent, to be made over; the fetal nervous tissue not having the capabilities for extensive work, being largely of an embryonic type. The changes in the osseous system, and the length of time required for the perfection of its development, are familiar to you all, and need only mention to be appreciated.

We might go on and enumerate many more striking demands for nutrition in the child not illustrated by any counterpart in the adult economy. Enough has been said, however, to emphasize in a general way the importance of faultless nutrition for the proper development of the child.

The influence of faulty nutrition as an etiological factor in scor-

butus and rachitis will be discussed by writers in this Section. The excessive tax put upon the eliminating organs by a faulty diet and the relationship of external protection to nutrition will also receive attention. Dyspeptic diarrhœa, one of the sequelæ of dietary errors, and proper substitute feeding in infancy, its direct prophylactic measure, will be presented to you together.

With the aim of presenting the foundation for the special essays to be presented upon inanition, malnutrition, marasmus, and anæmia, I desire to briefly call your attention to the various purposes of the different food-principles.

One of the best divisions of foods for a study of their uses is that given by Thompson in his valuable work on "Dietetics," viz.:

I. Water.
II. Salts.
III. Proteids.
IV. Starches.
V. Sugars.
VI. Fats and Oils.

In defining the uses of these different food-principles I shall quote freely from Thompson.

Uses of Water in the Body: 1. "It enters into the chemical composition of the tissues."

2. "It forms the chief ingredient of all the fluids of the body, and maintains their proper degree of dilution."

3. "By moistening various surfaces of the body it prevents friction."

4. "It furnishes in the blood and lymph a fluid medium by which food may be taken to remote parts of the body and the waste material removed, thus promoting rapid tissue changes."

5. "It serves as a distributor of body heat."

6. "It regulates the body temperature by the physical processes of absorption and evaporation."

Water composes about seventy per cent. of the entire body weight; the daily intake and output of water should be about one-fiftieth part of the body weight. One of the most universal dietetic failings is a neglect to take enough water into the system for a proper maintenance of the physiological functions.

A deprivation of water shows its first effects in imperfect elimination—a continued deprivation changes the amount and character of the digestive secretions, thus impairing their capabilities. Imperfect nutrition, inability to rid the body of noxious compounds, the result of faulty digestion and tissue katabolism, and obstinate constipation, are common results in children fed upon too concentrated food and supplied with too small an amount of water.

Emaciation changes in the blood and in the nervous tissues will also surely follow from a continued deprivation.

An excessive use of water, a condition which often obtains in children fed upon diluted milks and various proprietary foods, increases the

blood-pressure, forces the eliminating organs to do an excessive amount of work which may in the kidneys result in an alteration of their structure, and weakens the digestive organs by over-distention. The shape of a two- or three-months-old baby stomach who is obliged to swallow eight or ten ounces of fluid to obtain sufficient food for one meal will be materially changed. A dependent diverticulum is formed by over-distention which at all times contains liquid, and partially digested foods flavored with lactic acid, butyric acid, and other irritating products of imperfect digestion. Such a stomach never normally empties itself, more or less frequently it will revolt, and empty upward what it cannot pass through the pylorus.

Uses of Salts are: 1. "To regulate the specific gravity of the blood and other fluids of the body."

2. "To regulate the chemical reaction of the blood and the various secretions and excretions."

3. "To prevent the tissues from disorganizations and putrefactions."

4. "To control the rate of absorption by osmosis."

5. "To enter into the permanent composition of certain structures."

6. "To enable the blood to hold materials in solution."

An excess of salts may act as a local irritant to the gastric or intestinal mucous membrane; may modify the rate of absorption; may interfere with the nutritive and chemical processes of the blood and tissues. Certain salts in excess tend to cause the deposit of calculi and concretions.

Continued deprivation of salts is followed by signs of malnutrition and mental inactivity, and is one of the factors in the development of rachitis and scorbutus.

Proteids are also an absolute necessity, as they supply the material from which the new proteid tissue is made, and the old proteid tissue is repaired. The most important constituent of living matter is the proteid part of its molecule, and this can only be supplied by proteid food,—a prolonged deprivation of this food principle would result in emaciation and starvation even though all other food principles were abundantly supplied. Proteids also have an important use in the production of energy; they are complex compounds; they contain a large amount of potential energy, much of which is utilized in tissue metabolism.

The tendency in this country, however, is toward a disproportionately large amount of proteid food, which taxes the eliminating organs by requiring them to excrete in addition to the normal waste a large amount of proteid derivatives which have served no purpose in the animal economy. This means excessive work for the liver and kidneys, and is recognized as one of the common causes of all forms of lithiasis.

There are on the market many food compounds recommended as milk substitutes which are composed in part of proteid meat extracts

and derivatives; they differ in their structure and behavior from milk proteids, and seriously tax an infant's digestive and eliminating organs.

Under their use the fæces become more bulky, of a dried consistency, gluey in character, and by their odor give evidence of decomposition of undigested material. The urine becomes loaded with amorphous urates, uric acid, and abnormal peptone derivatives; a catarrhal condition of the bladder with its distressing symptoms often follows; the skin loses its clear, smooth surface, becomes roughened or even eczematous. The child is irritable, a poor sleeper, and subject to catarrhal inflammations.

I have seen all of this train of symptoms vanish where the child has been put upon a properly modified diet. During the first year of life the proteid element of food should come exclusively from milk; during the second year the proteid element of cereal food can be well digested, but the proteids of meat should not be used before the child is three years old.

Starches and Sugars.—Their chief physiological value lies in the fact that they can be destroyed in the body, and by their destruction liberate energy. The energy of muscular work and of heat comes most easily and cheaply from the oxidization of carbohydrates. Seven of the thirteen per cent. of solids in milk consist of carbohydrates.

In preparing a substitute for mother's milk we must bear in mind that an infant who requires fifty per cent. of its solid food of this character can only use it to an advantage in one form, viz.: Sugar of milk.

The Uses of Fats in the Body are: 1. "To furnish energy for the development of heat."

2. "To supply force."

3. "To serve as a covering and protection in the body."

4. "To lubricate and make more plastic various structures in the body."

5. "To spare the tissues from disintegration."

6. "To serve for the storage of energy."

About one-fifth of the body-weight is composed of fat; a large part of this is derived from carbohydrates, but some of it comes directly from fat in the food.

Its importance can be estimated by referring again to the composition of milk, where we find that one-third of the total solids are fat.

Chemical examination of the fæces demonstrates that in a child fed upon normal milk nearly one-half of the fat is not digested, but serves as a lubricant for the bowel in its work. Human milk has been found to be more often deficient in fat than in any other ingredient. Constipation is frequently the first sign of a deficiency of cream; the addition of cream to the baby's diet is at such times its best remedy.

Again, in early infancy a sudden demand is made for a new physiological activity; up until birth potential energy has been converted into heat only to a minor extent, but with a separate existence this becomes an important function. Cream next to sugar is the

source from which the infantile organism can most easily and cheaply obtain it.

The points I wish to make are:

1. A child's food has more varied and more lasting purposes to fulfil than has an adult's.

2. That good health and proper development require certain exactness in the relative and exact amount of different food-principles.

3. That as milk, whether human or bovine, is not always what it should be, it often requires to be modified or supplemented to furnish the infant an economical and sufficient nutrition.

4. That the same care should be given the diet after as during the first year of life.

Anæmia and Marasmus.

By B. F. Bailey, M.D., Lincoln, Neb.

We have been thankful that the term scrofula, that cloak which for so many years "covered a multitude of sins," has become practically obsolete. The attempt, however, to define more intelligently and in better keeping with scientific knowledge has not been, and is not, without its difficulties. That the many manifestations of the formerly so-called scrofulous diathesis are due to malnutrition can hardly be controverted; that the first evidences of this malnutrition are found in the blood is probable, but a hæmatic differentiation, so that we may be able to tell what change in the blood leads to anæmia, what to rachitis, what to marasmus, what to this pathological form and what to that, is as yet impossible. The term anæmia, hitherto signifying a deprivation or impoverishment of the blood, may now be considered to also refer to changed conditions of the blood, and may be assumed, in some of its forms, to be the probable initial field of the numerous diseases of malnutrition.

It is true there are certain diseases which we can diagnose from the study of the blood, which are the diseases of so-called primary anæmia. There are others which in turn impoverish the blood and are called the cause of secondary anæmia. Thus, if I may be allowed, I will assume that primary anæmia results in certain diseases, whereas secondary anæmia is the result of certain diseases. For example, the diseases of primary anæmia are, first, chlorosis, with its normal or nearly normal number of erythrocytes, though they may be abnormal in shape (poikilocytes), or unusually large (macrocytes), or perchance at times preternaturally small (microcytes), but always deficient in the coloring-matter of the blood (hæmoglobin). An increased number of (leucocytes, leucocytosis) is not common. In brief, not a condition of decreased red blood-corpuscles (erythrocytes), or increased white corpuscles (leucocytes), but of deficient hæmoglobin.

Second, we have as a primary anæmia, pernicious anæmia, in which there is a very great diminution of erythrocytes, a moderate diminution of leucocytes, and an increase of hæmoglobin. The large, red blood-corpuscles with fragmented nuclei megaloblasts are very common in this disease.

Third, anæmia infantum or pseudo-leukæmia—a rare form with a lessened number of erythrocytes (oligocythæmia); lessened hæmoglobin (oligochromæmia); an increased number of white corpuscles, or leucocytes (leucocytosis); considerable enlargement of the spleen, little

change in size of the liver, with an enlargement of the lymphatic glands, which is general and not excessive.

Fourth, leukæmia. This disease presents two forms—the splenic and myelogenous, or spleno-myelogenous, and the lymphatic. In both forms there is a marked increase in the leucocytes and diminution in the erythrocytes. It is not alone that the leucocytes are increased, but that the myelocytes or large mononuclear neutrophiles are in abundance in the spleno-myelogenous type, while the small mononuclear leucocytes, or lymphocytes, are absent. In the lymphatic type the leucocytes are not so largely increased, but the lymphocytes are increased proportionately, making, instead of as normally twenty-five to fifty per cent. of the entire leucocyte count, sometimes as high as ninety per cent. of the total count, and the myelocytes found normally in the marrow of the long bones and abnormally in large per cent. in the spleno-myenogenous type are rarely if ever found in the lymphatic type.

The secondary anæmias—that is, the anæmias that are in a general way considered to be the result of previous conditions, and not the cause of them—are usually due to some of the following conditions, although it is probably true that all diseased conditions result in a greater or less degree of anæmia. The special causes of anæmia are hemorrhages, acute infectious diseases, syphilis, intestinal affections, tuberculosis, etc. Most authorities also mention, as causes of anæmia, rachitis neoplasius, diseases of the skin and bones. I must, however, take exception to this view, and, until proven in error, shall believe that existing evidence indicates the changes of blood found in these diseases to partake more of cause than effect. To generalize, the so-called secondary anæmias should be discussed as effects or sequelæ of the diseases which cause them.

Of the primary anæmias, chlorosis proper is rare in children. Some doubt if it ever occurs, as, for instance, Weiss; while others, like Henrod, are equally insistent that it does occur. It is probable that it does occur, at least in a modified form. Progressive pernicious anæmia is usually fatal, except in the one type of the disease which has been caused by intestinal parasites, and hence was a secondary, not primary, disease, recovery ensuing after the expulsion of these parasites, namely, the anchylostoma duodenale, and the cothriocephalus latur. All attempts to prove the disease the result of micrococci have thus far failed.

Anæmia infantum, pseudo-leukæmia, is very fatal in its progress either from the course of the disease itself or from intercurrent diseases. Leukæmia, too, is held to be a most fatal disease, the spleno-myenogenous type, perchance, offers the most real hope of a prolonged life, while the lymphatic may offer the most apparent hope. I believe, however, up to this time the lymphatic type had been universally fatal.

Marasmus is now usually written of under the name of infantile atrophy, upon the technical supposition that marasmus, being a symptomatic term, it should not be used as designatory of a disease, but

again I fail, under the best writers and authorities, to find infantile atrophy anything more in its meaning or its elucidation of the subject than the older term marasmus. Pardon me if I here register a most emphatic plea against the continual increase of terms and terminologies, which, so far as utility is concerned, add nothing to our lore except a chance for the display of a seeming knowledge and a wearisome labyrinth for the student.

In this disease we have extreme atrophy, wasting of muscular tissue, without evident disease. The symptoms are those of gradual starvation. Actual lessening of weight of body, of muscular tissue, with sometimes slight enlargement of some of the lymphatic glands usually present; increased excretions from the bowels, though the skin is commonly dry; stools quite apt to be loose, vomiting may occur, though it is not common; patient is usually fretful and moans as if from the indescribable suffering of weakness. Temperature may be normal or slightly increased or decreased. Rotch says: "It is probably due to a vice of absorption." One of the most difficult things, and yet perhaps one of the greatest and most useful to learn to say, is, "I don't know." Evidently Rotch had not learned this, for he expressed little else in his "vice of absorption." It is commonly admitted that the cause of marasmus is unknown. To be sure, it often seems to be due to some grave intestinal affection, but we find ourselves unable to distinguish in any demonstrable particular the difference between two similar intestinal conditions, the one benign in its results, while the other is rapidly marasmatic in its trend.

The diagnosis is not always easy as between tuberculosis and so-called atrophy, several writers stating that the symptoms presented are exactly the same, even to a similar elevation of temperature, post-mortem examination or recovery only solving the problem.

It is a very intractable disease, but not by any means hopeless. After all, what have we? A few demonstrable facts of histology, our clinical memories and theories deduced therefrom. No one has been able to do better than this. Hence we, too, may be pardoned if we dare, in the light of our knowledge and experience, to theorize in a simple way. Throughout all nature the inorganic salts seem to have a wonderful office. In one place their office seems to be chemical, in another catalytic. Not always as easy to demonstrate the positive office of their presence as the dissolution resulting from their absence. Maragliano advanced the theory that serum deficient in these inorganic salts was destructive to the erythrocytes or red blood-corpuscles. If, perchance, this be true, we have then to consider whether a serum barren of inorganic salts is destructive from a toxicity, or whether it is only negatively destructive from a lack of cellular nutritive. We know that in the serum there is a predominance of sodium salts over potassium salts, also an advance of chlorides, but a scant supply of the phosphates. Now we know that these salts are the very ones that favor rapid absorption and osmosis, and we may consequently believe they in this way favor active nutrition. Further, we know

that when uric acid is most in evidence in the system, it is often scant in the urine, and therefore it is but a reasonable proposition that in a normal condition of blood-serum the phosphates and proteids are rapidly taken up by the corpuscles, whereas, with a minimum amount of the inorganic salts in the serum, there is a tardy transference of the salts of the aliments, and hence imperfect nutrition. To carry our argument still further, the corpuscles of blood both contain as vital elements of their composition a proteid matter of which nuclein is a prime factor, and nuclein is rich in phosphates. Without these phosphates the nutrition of the corpuscles cannot be efficient, and with imperfect corpuscles the general nutrition of the body must suffer from auto-intoxication, in that the activity of the lymphatic system is probably impaired by a lack of vitality of the white corpuscles, while the imperfect oxygenation resultant from weakened erythrocytes must prevent prompt disassimilation and rapid carrying away of débris. For instance, in the spleno-myelogenous form of leukæmia we find a surplus of old cells, the myelocytes, while new ones are not forming; the balance is lost and we have an anæmia, cachectic in character, with the evident auto-intoxication which is found in all anæmias. Again, in the lymphatic type of anæmia we find the lymphocytes, which we may with reason assume to be the younger corpuscles, in abundance, while there is a drought of the older form, and hence there is in the lymphatic system a rapid formation of embryonic tissue, not a neoplasm proper, but an embryonic hypertrophy. That I may not trespass or be tiresome, let us see in a few words what we may properly deduce from these assumed facts.

First. Inasmuch as we cannot find early pathological conditions in other parts, and inasmuch as in all cases of anæmia, marasmus and malnutrition are to a greater or less extent evident, we may judicially deduce the theory that the seat of primary anæmias and marasmus is in the primary laboratory of the body—the blood.

Second. Inasmuch as the processes of the body are largely chemical in character, the forces thereof being vital in origin instead of the manipulation of the chemist, it is but fair to presume that certain conditions and elements must be exact to bring certain results, otherwise we will have, as in the more delicate work of the laboratory or of the electrician, an imperfect conclusion, and that this conclusion is certain to be imperfect unless the primal steps are exact.

Third. Admitting this to be true, yet it is often difficult to trace the error in the laboratory, and impossible, in the human domain, but the difficulties only render it more imperative that we should adopt a reasonable hypothesis, and work it out to either a negative or positive conclusion, until we find by results that our hypothesis is a fact, and that our unknown quantities can be named.

Fourth. Taking these assumptions, together with experience, for our authority, we find in children that may present themselves for our care as anæmics and marasmatics a small heart with vessels as large or larger in proportion than we find in health or in adults, a

condition which in the adult results in low tension of circulation, and a tendency to fatty degeneration and poor muscular and hæmatic nutrition, and a weakened power of assimilation of inorganic salts. In the adult this may be endured for a long time, because the firmer tissues of the body, as the bones, etc., are formed and are, at least for a certain time, permanent. On the other hand, in this type of child we find more formative cells but less fibrin and hæmoglobin, thus a striving of nature under imperfect conditions to provide for the growth and nutrition of the child, resulting in rapid formations, but more rapid degenerations, because of the formations of embryonic and other than mature types.

Accepting these theories, which, to me at least, seem reasonable, we are ready to consider how we may by treatment correct these errors in nutrition and growth. First strengthen the heart and blood-vessels by careful massage and by the administration of the 2x of Strychnia in doses of one-quarter of a drop, morning and night. Second, correct the tardy assimilation by the administration of Natrum phosphoricum if there is evident acidity of the system, or of Natrum muriaticum should the symptoms, by their indications, evidence a lack of chlorides, following these with Calcium phosphoricum, Ferrum phosphoricum, Kali phosphoricum, Magnesia phosphoricum, or some of these nutritive remedies, remembering that Schlusslerism is but Homœopathy which Schlussler did not understand. That by administering these remedies we do not seek to supply the need, but to so correct the powers of assimilation that when we supply the system with food rich in the needed salts, they may be properly appropriated and not hurried into the sluice-ways of nature.

Our foods in marasmus must be contrary to the usual formulæ, at first rather high in sugar, low in fat, and rather under than over in proteids. As strength increases, fat may be increased as the system strengthens enough to dare its appropriation without injury. Many a case may rapidly benefit by adding to the milk a small quantity of Calcium phosphoricum and Magnesia phosphoricum, which renders the caseinogen of the milk more easily precipitated and digested. This being a nucleo-proteid, aids in the restoration of the proper ratio of nuclein of the corpuscles. In extreme cases it is wise to use in small doses as a food, protonuclein, or, where Calcium phosphoricum fails, though seemingly indicated, we may use the glycero-phosphate of lime, which is the nearest salt akin to that of the lecithin of the corpuscles and nervous system that we have, and which, in my hand, has given wonderful results in certain cases.

Do not forget, in cases refusing, after all aids, to properly oxygenate the blood, to give teaspoonful doses of the glycozone, which, I can assure you, has saved lives for me.

But, though so large a subject, so small is space and time that only a few thoughts have been jotted down. He who thinks and works must read between the lines.

Acute Inanition.

By A. M. Linn, M.D., Des Moines, Iowa.

Inanition means starvation. Starvation is usually accepted as indicating death from want of food, while inanition applies to an inability to assimilate the food taken. The non-assimilation may be due either to the poor quality of the food, or to the inability of the system to appropriate the requisite nourishment to sustain itself. Of these two causes of inanition the former is much more frequent. In crowded tenements in the poorer sections of cities the eye of the physician often falls upon the bony, impoverished child, starving for want of proper nourishment. The innutritive quality of the mother's milk may be due either to her own ill-health, mental or physical, or to overwork, or faulty self-nutrition. The result is inevitable: the infant becomes weak and scrawny from lack in quantity or deterioration in quality of its nourishment. Children born in such surroundings, where comforts are few and the bare necessaries of life are often wanting, are especially liable to inanition. They want sufficient vitality to begin the vegetative process, or soon cease to struggle. Feeble nature makes but a weak, ineffectual effort at nourishment, and, unless supported, the child soon dies of inanition.

Symptomatology.—Acute inanition means quick starvation. It may supervene upon a pre-existing malnutrition or as the result of exhaustion from disease. It is much more frequent among young infants, and does not occur often after the first year of life. Few marked symptoms manifest themselves in the course of inanition. No symptoms are pathognomonic of this affection. The emaciation may not be remarked until it has made much progress. The observant mother may have noted only that the child is ill. He may be petulant, or, more frequently, listless. There is either a fair appetite or an indifference to food. Sometimes the child will take no food, or at most but an ounce or two in the twenty-four hours, an amount totally inadequate to support the system. Vomiting does not often occur. Diarrhœa is a more frequent symptom, and the undigested character of the evacuations may help to a diagnosis of poor assimilation. Less frequently constipation obtains. The child soon manifests an aged appearance; the skin wrinkles, the eyes become glazed and sunken, the thermometer reveals a subnormal temperature, the heart's action is rapid and rather feeble. The whole picture presented by the symptoms indicates a threatened early collapse of the vital forces.

Etiology.—Many of the cases coming under your care result from want of assimilation of food. The abrupt or partial failure to take food is usually preceded by a period of gradual decline. It may come

as a sequel to marasmus. Few cases will be found that are wantonly starved. The decline in weight and in strength continues for a time, when nature, somewhat exhausted, abandons the struggle; the child refuses the proffered food or takes so little that it is utterly inadequate to sustain life; or it may result in this as in ordinary cases of starvation. The first hours the pangs of hunger are very severe, but gradually diminish toward a time of comparative indifference. The exhausted nerves of the vegetative system issue no urgent call for nourishment. The system reposes in a condition of comparative quietude and indifference to food. Unless some unusual stimulant is applied, the case progresses to an early fatal termination. One case of this type in my practice was saved by the use of pre-digested peptonoids.

Another form of inanition has been noted in a lying-in institute for unfortunates, of which the writer has charge. In this no normal appetite is present at any time; the system seems to crave no food. The child will neither nurse nor take an adequate amount of food in any form. These cases, conceived in sin, gestated in sorrow, and born in an atmosphere of grief, seem to want the ordinary appetite of a new-born child. They grow weaker, and rapidly lose in weight and strength, and shortly die. Others seem to thrive for a time, but if from some cause a change of food is made, they begin to fail, and even a copious supply of the previous nourishment fails to check their decline. No available means seem capable of preventing the rapid progress of emaciation, and they soon pass away.

Pathology.—No definite pathological changes have been noted as resulting from inanition. Indeed, it is more definitely described as a suspension of function than as a pathological lesion. Either as a result of poor quality of food or too scant a quantity, or both, the impoverished nerve-centres controlling nutrition cease performing their allotted function. The suspended operation of the impoverished nerves means a cessation of the vegetative function. Life continues as long as the involuntary movements of respiration and circulation, spurred by the systemic call for oxygen, can compel them to act. When no longer able to respond to these appeals, the spark of life goes out, leaving no pathological change of sufficient moment to attract attention. Of course, there is great emaciation and loss of weight, but these are the result and not the cause of the disease. The intestinal villi undergo no considerable change. Beneath a high-power lens the nerve-cells of the brain will be found shrunken and shrivelled, plainly revealing their inability to generate the required nerve-force to stimulate vital activity sufficient to maintain life. The child dies not because of structural changes, but because of suspended function.

Diagnosis.—No pathognomonic symptom marks this disease. According to Holt, it is "Distinguished from malnutrition by its greater severity, and from marasmus by its more acute character." The following diagnostic features are present in most cases: The rapid emaciation, partial or complete loss of appetite, quickened pulse, feeble heart's action, coldness of body, loose wrinkled skin, subnormal tem-

perature, anxious expression, sunken and glassy eyes, bowels loose or costive, etc. With these symptoms in one's mind, varying in gravity from light to severe, according as the case is in its inception or approaching dissolution, one is not likely to make an error in diagnosis.

Prognosis.—The prognosis in the average case is decidedly unfavorable. The inception of the disease is at once an evidence of low vitality or of having failed to such a degree that nature already abandons the struggle. At the very best, our efforts are attended with but partial success. This is not the class of cases which gives the most promise of favorable results. The best directed treatment will often be futile. We shall succeed in saving life in some unpromising cases, but the majority will shortly fail and perish of exhaustion.

Treatment.—The treatment of inanition is not usually attended with a full measure of success. The powers of assimilation seem to weaken with the general progress of the decline, and demand most energetic measures to awaken them to renewed activity. When insufficient food is the cause, the means of relief is easily determined. A supply of nutritious food gradually increased in quantity is both the means of relief and essential to the cure of the disease. When the nourishment is faulty in quality, the disease is more difficult of determination and of remedy. In the case of your little patient, the time is short, and "whatever is done, it were well done if it were done quickly." No time can be spared for doubtful experiments. A few brief hours or days at most, and the sands of life will run past that critical point where recovery is possible. Every effort should be made to secure a wet-nurse for the patient. Failing this, diluted milk should be used well peptonized, and given at rather frequent intervals. At one instance in the writer's practice, success was obtained from the use of malted milk, and in another from peptonized milk. Soups and broths are generally worse than useless. It is a well-known fact that the body is more quickly robbed of its vitality in a cold atmosphere. Careful attention, therefore, should be given to maintaining the temperature of the body by the use of warm applications; also sponging the body frequently, and applying moist compresses, may be helpful. Where vomiting is persistent, or there is a refusal to take sufficient liquids, life may be prolonged by the use of salt-water enema. Holt records one case in which he succeeded in saving life by the means of gavage. For this purpose, malted or predigested milk should be used. Numerous expedients may be resorted to in order to accomplish the desired purpose.

Remedies.—While the adjuvant treatment is important, the remedial treatment must not be neglected. No one can name the critical point of decline beyond which remedies cannot awaken a reaction. It is a proverb, "Where there is life there is hope," and while the child breathes we should hold with tenacious grip to the spark of life. We may be as successful as we hope, and more so than we expect.

The following-named remedies may be consulted in the treatment of acute anæmia: Sulphur, Arsenicum, Lachesis, Calcium carb., China, Nux vomica, Phosphorus, Iodine, Rhus tox., Thuja.

Malnutrition.

By P. J. Montgomery, M.D., Council Bluffs, Iowa.

Many things are known, or better understood, by comparison,—a negative cannot be understood without some knowledge of the positive. Malnutrition is the opposite of nutrition; it is therefore necessary first to know something of nutrition. Thomas, in his "Medical Dictionary," defines nutrition thus: "The assimilation or identification of nutritive matter to or with our organs; it is the most general property of organized bodies, for all the anatomical elements partake in it, and it characterizes life or vitality more than any other vital property."

Animal life, like the life of the plant, is dependent on light, moisture, air, and heat. Animal life, being a higher organism, demands those elements in a purer form,—sun-light, pure water, and air rich in oxygen, and modified heat. Besides these the plant, to give it life, strength, and beauty, requires part of the dust of the earth, while the animal life demands for its maintenance and development the life of the plant, or lower animal life.

If the "soil" is poor, no amount of light, water, and air can produce a vigorous plant.

The horticulturist, or agriculturist, who does not know what "soil" is good for certain plants is a poor nurse to nature.

The first great lesson for the mother to learn after the clothing is how to feed her child; notwithstanding nature has made a great provision in the lacteal secretion, we find cases where this comes as far short of being what the new animal life requires as sand does to the plant, and far too often this fountain of strength and happiness to the child is "dried up."

If from time to time the child is weighed and "found wanting," no time should be lost to discover the cause. If the food is good, the atmosphere pure, and other things as they should be, we must look for some defect in the organism, some malnutrition.

It has been said to know the disease is half the cure, but, as we live in a time when no one is satisfied with half-way work, the investigation must be pushed till the cause is found.

There is a specific cause for every pathological condition. That specific cause may extend back beyond the knowledge of the patient or parent; then, the physician has nothing to guide him except the shadowy lines from effect to cause. If we are called to see a child that has been losing weight, looks sallow or pale and old beyond its days, is peevish, its sleep is fitful, it has a lean, shrunken look; the lustre has gone from its eyes and the laughter from its lips, and the

temperature is abnormal, we have a case of faulty nutrition, or we may use a Latin word with a French prefix, and call it a case of malnutrition. By this we mean something has, or is, preventing cell-formation, and nutrition no longer keeps pace with the waste.

If the cause be improper food, the child has a lean and shrunken look though it may be over-fed, the abdomen is distended with gas, or may be in a collapsed state. The stomach and intestines are to the animal life what the roots are to the plant and tree.

If the skin is dry and wrinkled and has a senile appearance, and the eyes look like burned holes in a blanket, you should look to the glandular system for the cause, and back of that a syphilitic taint. If the child is weak, anæmic, and fading like a poor garment in the sun, the eyes the only bright spot on this dark record, then look to the sanitary conditions and surroundings; the child may be breathing more sewer-gas than oxygen; or a little later you will discover the terror of the present day, tuberculosis, the pathognomonic symptom of which is a rise and fall in temperature in every twenty-four hours, and the waste far excedes the nutrition.

The nutrition of the body—that is, the maintenance of the parts in a fit state to perform their function—depends on three main factors: the supply of suitable food, the assimilation of food, and the prevention or control of the waste.

Nutrition, in the widest sense of the word, comprises digestion, circulation, respiration, and secretion.

In the digestive ferment of the food, where decomposition stops, combination or assimilation begins. The converting a portion of that filthy substance in the intestines called chyme into that pure, wholesome, life-giving substance called chyle is a process beyond the chemistry of man.

The combustion of air in the lungs, the oxygen coming in contact with the blood and giving it its garnet hue, has a touch of mystery about it known only to nature, or that invisible hand that paints the rose.

The circulation of the blood, as it rushes to every part of the body and slows up at the surfaces, and then flows back to the heart and lungs to be renewed and reinforced with nutriment from the secretions, and starts again on its endless round carrying to every tissue and substance of the body some specific cell like its own to nourish and renew, has a sleight-of-hand performance never yet seen through.

The saying that we are "fearfully and wonderfully made" has a new meaning to the physician; for the more he knows about the construction and function of the human system the less he wonders, but more fully realizes how fearfully easy it gets out of order.

Malnutrition is a disturbance of that equilibrium of forces nature is for ever trying to preserve; it is a disarrangement of that delicate balance which, when perfectly poised, means good health. The human system is, in its normal condition, a perfect chemical laboratory; a failure in any particular affects the whole chemical composition.

The assimilation and elimination, the secretion and excretion, must maintain their poise, or nature soon loses the balance of power. It is not only necessary that the system be nourished in every particular, but it must be kept clean, or like an unswept house the cobwebs of melancholia soon settle in the brain, and the dust of asthenopia is in the eye, while the coarser débris is dumped into the liver or left to unnaturally swell the adipose tissue. This is what is so often termed the Cal. carb subject (fair, fat, and flabby). He has no more stability than the stucco buildings at the Trans-Mississippi Exposition—they are fair to look at, but if you will examine closely you will detect the cachexia of decay from the beginning.

One of the many causes of malnutrition, and by no means the least, is malaria. It impoverishes the blood, destroying to an alarming extent often the red corpuscles, and deranging the renal secretions. The skin is hot and cold by turns,—flabby, pale, and bathed with a clammy sweat more or less profuse.

There is a high and a corresponding low temperature, with general depression of the mental, nervous, and muscular system. These symptoms, with a worn, weary, and tired feeling, may continue for months, even years, when some insidious foe, in the form of an epidemic, attacks the unguarded forces, and the little sufferer succumbs to some organic disease.

In closely observing the ills of childhood, you will find malnutrition plays an important *rôle* in the development of many diseases of childhood, especially scrofula.

There is often a mistaken idea that some developed disease is the cause of the malnutrition, while the fact is the reverse. There are but few diseases that will attack, with fatal results, the well-nourished child.

We all know, from sad experience, membranous croup stands first in this small list.

Keep the system well nourished, and it will laugh at miasma and grow fat on bacteria. Prevention is the best way to cure this malady. Right here, I am grateful to be able to say that the science of Homœopathy is fast becoming not only a rescuing, but a guarding and defending, angel in its ministrations of beneficence toward the human race, and on the higher planes of its development.

We may hope to see it stamp out the hereditary taint of diseases that to-day confront us as hopeless cases.

Discussion.

B. H. Ogden, M.D., St. Paul, Minn.: I enjoyed the paper very much, and wish to compliment the Chairman on the selection of this subject. Malnutrition is not confined in its effects to those seen in childhood, but may extend its baneful results into adult life, thus affecting the whole subsequent career of the child. So we have a larger

problem on our hands in dealing with this condition than we might at first think.

There is nothing I would add to the very complete outline of symptoms, but would especially dwell upon the question, How shall we combat them? Whenever we confront a case of malnutrition we have a difficult task before us, and we must approach it somewhat in the spirit of the detective about to unravel a difficult plot. These little ones tell us nothing. The mothers even are inaccurate, and our success will depend upon our ability to determine the complexity of causes, some of which are often very difficult to trace. I don't know of any class of troubles in which the attention to detail is so necessary as it is in the diseases of children. In the majority of cases we do not have a trained nurse. We must depend upon the mother, whose lack of training is a cause of inefficiency. It is not enough to give directions, but you must *see* that the details are carried out. It is not enough to ask the mother of the character of the stools. You must examine it yourself. You must also see the food, and see if her preparation of it is correct. It is important in the early life of the child that the mother be taught the necessity of weighing it, and noting its continued growth. Many a case of malnutrition has become far advanced before the mother knows her child is sick. Every mother should weigh her child every week or two. The increase of weight is an important fact. If the child is not seeming well, but is gaining in weight, I have not the anxiety that I have if he seems bright but is not gaining weight.

The best food is the mother's food, and all of us have a great responsibility here in urging the mother to become the feeder of her child. Many times, on account of the methods of living, it is impossible for the mother to give the child sufficient nourishment, but it may be possible for her to supplement her milk with artificial feeding. I should be very slow to advise a mother not to nurse her child. A great many mothers are not able to give proper nourishment to their children on account of improper methods of feeding themselves, insufficient exercise, etc. A judicious regulation of diet and exercise and control of mental states will often so modify the mother's milk as to bring it back to the normal standard, and thus save her the trying experiences of artificial feeding. Malnutrition in the majority of cases means bad feeding, whether the food be natural or artificial. The treatment of such cases is largely hygienic. A smaller number of cases are due to defective assimilation, and here will be found the most satisfactory field for homœopathic medication.

WILLIAM E. LEONARD, M.D., Minneapolis, Minn.: The term "marasmus" has been used. That term, to my mind, covers a multitude of sins. It is to the child what the term "heart failure" is to adults. It means the same thing as "I don't know." It means the child starved to death, and we hardly know why.

An exhibition of the proper food is often an exhibition of the

proper remedy. Many of the nutritive salts which are thus part of the nourishment of the child are other forms of the indicated homœopathic remedies.

We had in the various papers excellent descriptions of the appearance and symptoms of the child suffering from marasmus or inanition, and yet I think missed one of the most important clinical symptoms, *i.e.*, the necessity of occasionally weighing the child, even though the parents may not think it sick. The symptoms mentioned of pallor, lack of appetite, and the whole picture, may be present for weeks or months without our realizing there is anything going on, unless we take frequent account of the weight. This is easily and conveniently done at the bath once a week, and record made upon a paper, from which the physician can compare normal weights.

L. L. DANFORTH, New York, N. Y.: I have been so much interested in this subject of infant feeding that I cannot refrain from saying a few words.

First, with reference to the effect of mother's milk upon the health of the child during the first weeks of infantile life. I think it is stated by the writer that a child nursed by its mother may be assumed to be getting just what its digestive capacity requires. Now, I do not think this holds true in actual experience. It is quite common to observe an infant that does not thrive at all during the first few weeks of infantile life; it vomits curds, cries with colic, and does not increase in weight as it should. The reason is, as a rule, that the mother's milk is too rich in proteids and perhaps deficient in fat. If, in such a case, the mother be directed to take exercise in the open air as much as she is able, and cut down her nitrogenous diet, the babe's condition will change for the better at once. I recently had a case which illustrated this form of indigestion very typically. The child cried all the time, had colic, did not increase in weight, and had too frequent stools. From a previous experience with that same mother, and also from her pallor (she was a pronounced blonde, and anæmic), I assumed that the proteids were low. But, to make sure, I had the milk analyzed, and we found the proteids high (1.99 per cent.) and the fats low (less than three per cent.). The child could not take care of the high proteid; its digestive organs, the stomach particularly, were being overtaxed. Less nitrogenous food, and exercise, corrected the difficulty for both mother and child. In many cases this disproportion in the food ingredients corrects itself as the mother gains in strength and resumes her accustomed duties.

Another point: we may judge as to the quality of the milk by its effect upon the digestion of the infant.

If proteids are too low, the child will not increase in weight and will often become constipated. If too high, the child will vomit sour fluid and curds, have colic and green stools. When proteids are in correct proportion, the stomach digestion will be perfect and the child will increase in weight, and yet constipation may be troublesome. The

addition of a little cream will usually correct this fault. Dr. Cobb stated in his paper that the proteids should be supplied to the child during the first year of life *only* in the milk. I do not quite agree with him in this opinion. Stationary weight and constipation may be present, and any attempts to increase the proteids in the milk will be followed by sour stomach, vomiting, and colic. The stomach cannot take care of more nitrogenous food in the form that it exists in milk. But if the proteids be supplied in the form of beef-juice, two or three teaspoonfuls a day, the improvement will soon be noticeable.

Dr. Leonard spoke of the necessity of weighing the child. I think we should be explicit in our directions to parents to have this done regularly, once a week, and, in critical cases, twice a week. A child should gain six to eight ounces a week. If it does not gain at all, or only an ounce or two a week, the food is insufficient and should be changed or improved.

C. J. LUYTIES, M.D., St. Louis, Mo.: I am very much interested in this subject on account of my connection with a number of institutions where infants are treated. I believe the causes are not so much those of the blood as that the blood's condition is due to the inanition, or lack of assimilation, on the part of the child, and what causes this lack of assimilation is what we want to consider. I believe that is due to a variety of causes. One is improper food, another is proper food in improper quantities, and given at improper times. As to the improper food, we all realize what it is: That which will bring about a diseased condition. With regard to proper food given in improper quantities, we all know that the volume of food is increased one-third by the process of digestion. The stomach should be empty for a time to be prepared for the subsequent meal. I believe there is an improper time of feeding, when the child is not in a condition to receive food at all. If the child is restless all night, the food should be diminished in quantity. The digestion is frequently interfered with by substances in the intestinal cavity.

CHARLES GATCHELL, M.D., Chicago, Ill.: It is little that I can add to this discussion, already so thoroughly covered. I will, however, give you the benefit of a suggestion in the matter of the treatment of cases of anæmia, chlorosis, and malnutrition generally. It is of especial value in the treatment of so-called "scrofulous" children. I refer to the sun-bath. It is a very easy matter to improvise a home solarium for the purpose. Place a table before a window which admits the direct rays of the sun. The window may be open or closed, according to the state of the atmosphere and the season of the year. On the table spread a folded comforter, covered by a sheet. On this place the child, divested of all clothing. Let the bath continue for an indefinite length of time—as long as the child is quiet and content. The two precautions to be observed are to protect the child's eyes from the glare of the light, and to guard the skin from sunburn. A bath of an hour's

duration is not too long, but there is no limit to the time so long as there is no danger of sunburn. This latter is not apt to occur. It can be guarded against, on hot days, by giving the sun-bath early in the day or late in the afternoon. It adds to the child's comfort if the skin is gently stroked by the hand of an attendant. Don't forget the protection of the eyes. By the treatment that I have described I have had very beneficial results in the class of cases under discussion, and I earnestly recommend it to others.

H. W. PIERSON, M.D., Chicago, Ill.: No physician can fail to be interested in the discussion of a subject of so much importance as that of a young life. I am surprised that so little has been said with reference to the fundamental or underlying principle of the whole thing, the *mother*. If we expect to thoroughly consider all the features involved in the study of the life that is just beginning to bud, it is very important that we begin at the foundation. After this factor has been thoroughly investigated, then it is of extreme importance that attention be directed to the environment. The greater part of the mortality of infants is due to the superficial examination on the part of the attending physician. He inquires with reference to the present condition without going into that careful study which will determine how much of the present condition is due to environment, improper feeding, and *impaired vitality transmitted from parent to child.* Cases that seem to be properly nourished, and have all the appearance of health, become sick, and very rapidly pass into a state of emaciation, weakness, etc. No kind of food agrees, all forms of palliative treatment fail. In these cases we should go through the same process of investigation as where we have the privilege of treating the mother during gestation, selecting that line of treatment which takes into consideration the antecedents of the child as well as the present condition. This will generally point toward a psoric, sycotic, or syphilitic, taint which must be removed in accordance with the principles laid down in the "Organon" or "Chronic Diseases."

T. C. DUNCAN, M.D., Chicago, Ill.: I have been very much interested in the discussion of these papers, and I have listened for one thing that I have not heard. And that is, the child. The diagnosis from the child's development stand-point. All children are not the same. They are supposed to weigh seven pounds at birth. If they are a great deal smaller, then you have inanition or marasmus from the beginning, and what can you expect by the way of digestion? As old Dr. Shipman said, after he had established the Chicago Foundlings' Home: "I thought I knew all about children, but when I had a lot of foundlings I found I knew nothing." There are constitutional defects—organs not developed. Take the organs of digestion. You sometimes find the stomach as big as your two fists and the liver not as big as your hand.

There are a few expedients that I find good to adopt very early in child life. The first few hours of child life the skin undergoes almost

a positive inflammation, and the mucous membrane is also involved, giving us a condition that if we feed early then we have a sick child; and hence, I enjoin the nurse and mother to let the child alone until this physiological process has gone along and given the system, skin, and mucous membrane, a thorough opportunity to get in proper condition.

DR. BOUTIN: Frequently these cases are caused, or if not caused are kept up, through a lack of water. I have asked with regard to a child a year old, "Is the child thirsty"? "They never thought of such a thing." "They never gave it any water in all its life." You should offer the child water every time it is fretful a few hours after feeding. The trouble with many of them is that they want a little water. The food in the stomach may not be digested, and they do not want milk but simply water, and they are often given milk instead.

Acute Dyspeptic Diarrhœa.

By T. F. H. Spreng, M.D., Sioux City, Ia.

Dyspeptic diarrhœa includes nearly all the cases of summer diarrhœa. It at least forms a stage in these cases—nearly always the initial stage, but sometimes it is the final one.

The etiological factors entering into the causes of dyspeptic diarrhœa are summer heat, artificial feeding, bad habits of feeding, improper foods, impure milk, bad surroundings, and city residence.

We have not the time here to discuss separately these different factors. We are, however, constrained to say a word on the bad habits of feeding. The pernicious practice indulged in by so many mothers of applying the infant to the breast, at any and all times, in order to still its cries, should be discouraged. The mother should be impressed with the importance of regularity in feeding. Of hand-fed infants, we believe that thousands have been sacrificed by the use of that most treacherous breeder of disease germs,—the flexible nursing tube. A thing like this, which requires so much care to make it what it seems —a simple, harmless device—ought never to have found its way to the lips of the new-born. Aside from itself being a disease breeder, its use encourages the pernicious habit of filling a large nursing-bottle and putting the nipple into the child's mouth, while it lies in its crib or carriage, allowing it to eat and sleep alternately for the greater part of the time. By taking food in this irregular manner, there can be no such thing as healthy digestion.

The administering of food in proper quantities, at proper intervals, with absolute regularity, and the stopping of night-feeding and nursing as early as possible, is the first essential of healthy digestion.

Dyspeptic diarrhœa is caused by undigested food in the intestines, and by the putrefactive changes in such food. If the cause is a transient one and the resistance of the patient is great, and the case properly managed, there is only functional disorder, and complete recovery is a matter of only a few days. But, if the patient is susceptible, and the existing cause continues to operate, or when the case is improperly managed, the process continues and anatomical changes are produced, and thus the case which in the initial stage was dyspeptic diarrhœa becomes one of gastro-enterocolitis.

We meet with two forms of symptoms; first, a mild form with a gradual beginning, with little or no fever, and usually without any gastric disturbance; secondly, a severe form, in which the attack is sudden and severe, attended by a high temperature and by vomiting.

In the milder form, the first few days may develop no symptoms

except the diarrhœal discharges; a fretfulness and peevishness, and the child may seem generally out of sorts. Because there are so few general symptoms, these cases are allowed to go on for several days by mothers under the general belief that "the children are only teething."

The stools are thinner than normal, are yellow or green, and there may be found in them masses of undigested fat, and occasionally curds. The odor is sometimes offensive, but frequently not. After the lapse of a few days the stools contain, in most cases, more or less mucus. Starchy foods and fruits may be found in the stools undigested. The appetite is usually impaired and, after a few days, may be lost entirely. The tongue has on it a thin white coating, and in very young subjects the mucous membrane of the mouth may be covered with thrush. In some cases the general health may not be noticeably affected for two or three weeks. In others, after a few days, the children grow pale, become emaciated, their limbs become soft and flabby, and their spirits are depressed. If proper treatment is instituted, and the cause removed, there will soon be manifest a favorable change in the color and character, as well as in the frequency of the stools. The appetite returns, the strength and spirits revive, and the children recover after an illness of from four days to two weeks. Relapses are sure to occur by irregularity in diet, especially by over-feeding. Severe acute symptoms may supervene at any time, and the case may develop into cholera-infantum or enterocolitis. When these changes do take place they are sudden, and are caused by a spell of very hot weather or some gross dietetic error.

The clinical picture is quite a different one in the cases developing suddenly. For some days there may have been symptoms of slight intestinal derangement, or the attack may begin abruptly in a child apparently healthy. The child is restless, cries much, seems in distress, and sleeps but a few minutes at a time. The skin is hot and dry, the temperature rises rapidly, the abdomen is distended and hard, the legs are usually drawn up, and all the symptoms indicate that some grave disorder is pending. In some cases the nervous symptoms are so severe that convulsions ensue. In a very few hours after the onset, the stomach and bowel symptoms manifest themselves. Vomiting first ensues, the substance vomited may be undigested food taken many hours before. If this food was milk, it comes up in hard curds, and is sour. As the vomiting continues, the substance thrown off consists of mucus and serum, and sometimes bile. The taking of food or drink easily excites vomiting.

Diarrhœa soon follows, the stools are at first feculent, but soon become very thin, yellowish in color and of a very offensive odor, and are accompanied by great bursts of flatus. In some cases the stools are green or greenish-yellow, gray, or brown. The *characteristic features are the colicky pains preceding the discharges, the amount of gas expelled, and the foul odor.*

In a large per cent. of these cases a free evacuation of the bowels is followed by a decrease in temperature, the nervous symptoms sub-

side, the child falls asleep, to be aroused for an occasional stool after a few hours.

While in the beginning the prostration is often great, it is of but short duration, and, if properly treated, the acute symptoms will subside in from twenty-four to thirty-six hours, and the case go on to a rapid recovery.

If the child is cachectic and badly nourished the fall of the temperature is often only temporary, vomiting may have ceased, but the diarrhœa continues, the stools change in character, are not so fluid and not so offensive, there is present more mucus, and they may contain some blood,—in other words, the case merges into enterocolitis.

Such are the symptoms in infants. In children over two years old the diarrhœa is brought on by ingestion of some indigestible article of food, such as unripe fruit or berries, or milk which has been tainted from exposure. The temperature is lower, but the pain is much more acute.

We distinguish dyspeptic diarrhœa from cholera infantum by its milder character, the temperature being usually lower, prostration not so great, and the nervous symptoms not so marked; but more especially do we distinguish it by the stools, which in cholera infantum are large, serous, neutral, or alkaline.

It is not possible in the first day or so to differentiate between dyspeptic diarrhœa and inflammatory diarrhœa. The onset is often identical. If the severe symptoms and fever subside in twenty-four or thirty-six hours, we may safely conclude that we have had only a putrefactive process with functional derangement, while inflammatory changes are evidenced by a continuance of severe symptoms, and especially of the fever beyond the second day.

Hygienic and dietetic treatment is of paramount importance in the treatment of this disease—I dare say it is of greater importance than medicinal treatment. It is well to remember that digestion is practically arrested during the acute febrile stage, therefore to give food at this time could do only harm, irritating the stomach until it is vomited, or passing into the intestine adds to the fermenting masses there present and aggravates the existing disorder.

In nursing infants, so long as a disposition to vomit continues, food must be proscribed. Rice-, barley- or toast-water in small quantities may be given to allay thirst. If these are refused or vomited, then everything should be withheld. After the stomach has been quiet for eight or ten hours it is safe to allow the child to take the breast, allowing it to nurse one-quarter or one-third its accustomed meal. Three hours should be allowed to elapse before the child is again put to the breast. As the child's stomach grows more tolerant the amount nursed may be steadily increased.

To be called to treat a very young infant having dyspeptic diarrhœa, that is hand-fed, and in the heat of summer, is to be brought face to face with one of the most difficult problems in management of diarrhœa.

While a child that is nursing may be returned to the breast, so soon as the vomiting is permanently controlled, it will not do to follow the same rule with respect to cow's milk. Generally this must be withheld, in all forms, until the acute symptoms are past. Our reliance here is upon egg-water, chicken-, mutton-, or beef- broths, barley- and rice-water, and the dextrin foods, such as Horlick's, Leibig's, or Mellin's.

When the symptoms of acute fermentation have subsided, and the stools are less frequent, a little cow's milk may be added to the diet.

In older children, where the diarrhœa has been caused by improper articles of food, a milk diet may be given with success, but the milk should be boiled, and at first a little lime-water added.

Since our treatment is to be directed against the process of fermentation or putrefaction, and toward the restoration of the normal gastro-intestinal functions, which have been deranged, we deem it of first importance to thoroughly evacuate the fermenting masses from both stomach and intestines. For stomach washing a large-size flexible rubber catheter is the best instrument to use, and plain lukewarm water the best fluid. A single washing in most cases will suffice.

Irrigation of the intestine should be most thorough. The catheter, or small rectal tube, should be passed into the colon—if possible beyond the sigmoid flexure. At least eight inches of the tube should be made to pass within the bowel, then the intestine above is readily filled; a saline solution—one drachm of salt to a pint of boiled water—is what we use. One irrigation in twenty-four hours is all that is required.

Of the remedies that are most likely to be indicated in the treatment of dyspeptic diarrhœa, we will mention a few, together with their indications.

Arsenicum alb. will be found to be homœopathic to the case when there is present great irritability of the stomach, vomiting after eating or drinking. The child is extremely restless, stools dark green mucus, or brown, or black, and watery. Discharges very offensive and excoriating.

Chamomilla is indicated when the stools are yellowish-green, or like chopped eggs, mixed with bile; they have the odor of sulphuretted hydrogen, and are excoriating; there is colic before and during stool, relief after. Children are very fretful.

We think of China off. when there is distention of the stomach, where there is slow digestion. The food seems to lie a long time in the stomach and causes eructation, and is finally vomited, undigested. Distention after eating a little is characteristic. The stools are watery and contain undigested food, the evacuations are debilitating and may be involuntary, worse after eating fruit; stools may be yellow, brown, or black, and offensive.

Colocynth should be prescribed when the stools are preceded by griping in the abdomen, and are provoked by the slightest food or drink. The stools are fluid, copious, or papescent, and the griping is relieved by bending double.

Podophyllum suggests itself where there is a painless morning diarrhœa of watery yellow stools; these are profuse, and pour out like from a hydrant, preceded by retching and vomiting; the stools are worse after eating and drinking.

Croton tig., like podophyllum, has profuse watery yellowish-green discharges, gushing out like from a hydrant, but under croton tig. they occur when the child eats or drinks.

Calcaria phos. will be called for in scrofulous and rachitic children, where the stools are green, slimy, and undigested. It is a noisy, offensive, watery, and spluttering diarrhœa with a great deal of offensive flatus.

Ipecac is indicated when there is a yellowish or white-coated tongue, when there is present almost constant nausea and vomiting. The child throws up its food and large quantities of green mucus. The stools are grass-green mucus or white, fermented like yeast. Colic and sick stomach before and during stools, and there is an inclination to sleep after vomiting.

Veratrum alb. is the remedy when vomiting is excited by the smallest quantity of liquids. The least motion increases the vomiting. Stools greenish, watery, with flakes. Before stool there is severe colic; during stool, cold sweat on forehead, and there is violent thirst for cold water.

Apparel of the Child: Its Influence upon Nutrition.

By P. E. Triem, M.D., Manchester, Iowa.

An eminent writer has said, "One of the most interesting books that could be written would be a treatise on the errors of mankind." Perhaps in no other department of domestic life has there been a greater display of error than in the fashion and material of our garments, whose primary object is to protect us from exposure, as well as to conserve the vital forces within the body. And, indeed, not only have errors of judgment contributed to this fund of health-destroying apparel, but the caprice of Dame Fashion has cast her blight over many an infant's mantle. Does it not seem strange that Nature, so prodigal with all her other creatures, has never so much as provided a stitch for the masterpiece of her workmanship, and, still more strange, that she should have left him with so little judgment in the application of her laws demonstrated in the lower orders of creation all about him?

How appropriately might it be said: Study the warblers of the air that flit about your door-yards, and with their merry songs seek to entice you to their homes. Behold the tiny birdlings, with scarce a feather to cover their quivering forms, so neatly and cosily encased in their cradle of wool and down! It would put many a young mother to shame to study this simple abode, so simple, and yet fulfilling all the requirements of healthfulness.

Not the least menacing problem of modern life has been how to properly clothe the body, and, like all other problems which depend upon evolutionary development, it has never yet been solved to answer the daub requirements of our esthetic and physical natures. Its first conception was that of a mantle or cloak with which to cover the iniquitous depravity of the fallen race, and, strange to say, that idea very largely prevails to the present day. Surrounded by the gorgeous display of nature's adornments, the idea soon merged into that of ornamentation, which in time gave rise to the ever-varying fashions, diverting the mind from one of the more essential purposes of the garments.

But, as the borders of that primitive family became too narrow and the ambitious youths began "to reach out for more lands to possess," there was added another element to the requirements of this garment, viz., that of protection against climatic and atmospheric changes, calling into requisition the inventive genius, and invoking nature's great storehouse to furnish material to supply this need. And thus on, down through that ever-varying course of human events, has the garment sought to gain a paramount position, until it has rivalled every

industry and invaded every land and sea, and, reaching out beyond the body, it has erected palaces and mansions of colossal dimensions and superb decorations.

In order that we may not become lost in this great world of industry, I will invite your attention to the consideration of the apparel of that product of misconception—a wailing infant—so small and insignificant as compared with the whole human race, but bringing to every mother no small world of care.

The apparel of the child in its relation to nutrition involves a very essential consideration of its existence. When we remember that nutrition comprises digestion, circulation, respiration and secretion, its importance, from the stand-point of the physician, will be readily conceded. Experience also teaches that motherly vanity is a vexatious enemy to the rational physician, and, with his best endeavors to fortify the frail constitution against physical inaptitude, he too often meets with signal defeat. It would be impossible to estimate how much of the degeneracy of the human race should be directly attributed to the misapplication of physical agents, at that period of child-life, when it is so susceptible to external impressions. Yet the thoughtful observer need not search long to find examples which will warrant the assertion that the strongest stamina may be converted into never-ending debility, or pitiable helplessness. Too little stress is put upon the *symmetrical* development of the body. The nutritive processes may be arrested in some organ or member, and thus the harmony of all the functions, which constitutes health, is destroyed. From the moment the infant draws its first breath, and the circulation assumes an independent course, the task of assisting in the harmonious action of the vital processes begins. The first outcry, hailed with so much delight, is for shelter and protection, and too often is the swaddling cloth converted into the shroud of the infant. Consider for a moment the rapid transition through which the new-born infant has passed. Practically its whole existence has been in a medium of uniform temperature, much higher than it is likely to meet even under the most carefully instituted methods. The shock to the nerve centres may be sufficient to arrest in part, or wholly, the nutritive processes, and defective development must follow. The infant's first investment should be a warrant of the sacred obligation of those to whom it has been intrusted. Its first apparel is of greater importance than the inheritance of a fortune in later life. The same conditions obtain through its whole infant life; in fact, it is a succession of transitions, which requires the delicacy of educated hands to insure uninterrupted growth. The apparel of the child must fulfil this first requirement, viz., that of maintaining suitable warmth and protection against changes of atmosphere.

Next in importance to the maintenance of equable temperature is the freedom of muscular action and circulation. Perhaps an illustration can be drawn from the more primitive method known as swaddling, "a tale of the olden time." When the child was completely dressed in its bandages it not unaptly resembled billets of wood, or

the form of an Egyptian mummy. The skin was sometimes excoriated, the flesh compressed almost to gangrene, the circulation nearly arrested, and the child left without the slightest power of motion. In a word, it had no resemblance to anything living; its frequent and unavailing cries alone determined it to be human. Such is the description of this relic of barbarism by Dr. William P. Dewees in 1847. In the light of experience and the progress of science, have we, in this year of our Lord 1898, thoroughly divested our infants of this damnable bandage that sometimes excoriates the skin and compresses the flesh almost to gangrene? There was some ground for plausibility when the whole body was enveloped by the bandage. But the practice loses all semblance to rational procedure when both ends are cut off, and the child is bisected cross-wise. The pernicious effects of constriction are self-evident, involving several of the prime factors of nutrition. The garment should be so adjusted that there is freedom of every muscle. There certainly should be no constriction of the thorax and abdomen. The violation of every fundamental law of its being cannot fail to meet with disastrous results to the child. Yet how often do we fail to detect the proper cause of malnutrition? The child begins to fade, and forthwith we analyze its food and the air it breathes. These, indeed, should be pure. But why repose such implicit confidence in the mother's ability to clothe her infant properly, when daily experience teaches us the contrary?

There is still another source of evil in the improper arrangement of the infant's apparel which should not be forgotten. While it may be adjusted so as to meet the requirements of muscular and circulatory freedom, and thereby insure a healthful demand for nutrition, the over-zealous mother may have been too lavish in the quantity. Much as we deprecate ill-judged exposure, we are inclined to believe it is scarcely more injurious than over-stimulating the tender systems of infants by means of injudiciously applied heat. Heat, beyond a certain degree, or when too long continued even in an inferior degree, acts like any other stimulus upon the vibratile system of very young children. It over-stimulates the nervous, goads to excessive action the circulatory, and relaxes the muscular systems. In consequence of this, the different parts of the body do not develop in their most healthy order, or in their natural proportions,—the whole body is urged to a precocious expansion. We thus invite disease by the destruction, or too great a diminution, of certain important secretions. The over-tenderly brought up children, "the instant the winds of heaven a little too rudely visit them," become early victims to serious diseases, or drag out a protracted existence in which there is neither comfort nor enjoyment. This hot-house plan of rearing children, in consequence of which no organ is prepared to perform its functions properly, has ever had more victims than triumphs. A most remarkable instance of precocious maturity is that related of Louis II., King of Hungary. He was born so much before his time as to have no skin. At two years old, he was crowned; in his tenth, he succeeded to the throne; in his

fourteenth, he had a complete beard; he married in his fifteenth; he had gray hairs in his eighteenth, and in his twentieth, died.

Let us draw a few practical conclusions from this general consideration of the subject.

First. A more thoroughly scientific knowledge of the relation of the apparel to nutrition is necessary. This implies the constant supervision of those who are the guardians of the public health, and should be the first object-lesson taught to every mother. While, in the main, the natural requirements of the child should indicate to a thoughtful mother the general make-up of its apparel, there are many minor details which she does not understand, or, possibly from personal motives, may be inclined to disregard. The kindly offices of the family physician can be most easily interposed in behalf of the child, and it should not be beneath his dignity to investigate its apparel and eliminate objectionable features.

Second. Nutrition is a *product*, of which the apparel is an important factor. Properly clad is often better than well clad. The child will not digest more food, however suitable and well prepared, than it is able to assimilate. Arrested nutrition may come through cutaneous impressions as a result of suppressed or abnormal secretions.

Third. Abnormal development is no index of health. While the garment should afford suitable protection, it should not over-stimulate. To give the child a healthy growth requires such changes as are suited to its successive periods of development. Though the child may be crowned at ten, he will most surely die at twenty.

And fourth. To obtain perfect results, every detail of the child's apparel must conform to natural laws. Nothing can be more dangerous than the random application of principles that are in themselves doubtful. The child is the miniature man or woman. Disturb the harmony of its physical being, and you have wrecked a life for which the law of God will demand retribution.

Discussion.

C. H. Cogswell, M.D., Cedar Rapids, Ia.: I want to say to the members of the Institute that I think the doctor has taken up an important subject. If the child is not properly clothed, the matter of feeding does not amount to much. The paper does not go far enough. I do believe this, that the proper clothing of the child is one of the great considerations, without which food matters little. While clothing is necessary at all ages of life, it is especially necessary the first few months. More harm comes the first hour of the child's life than in any other hour of his life. That fact is of great importance.

The Urine in Diseases of Nutrition.

By H. W. Westover, M.D., St. Joseph, Mo.

During life we find a continual disintegration and wearing away of cells and tissues, accompanied by upbuilding, and replacing the old by new. This is metabolism.

The kidneys play a very important part in the excretion of the so-called waste products of the body.

Therefore, when the metabolic processes are increased, and at their height, the renal activity must proceed *pari passu* in order to maintain the equilibrium of health. With increased activity of function, we find an increased liability to perverted action. As a result of over-stimulation, this excessive activity of the cells, or a perverted and abnormal action, may be followed by a decreased ability to perform their tasks. These conditions may be simply functional, or, if the abnormality continues, they may sooner or later result in structural change, and the further these abnormal conditions become removed from normal, the more difficult becomes the task of securing a return to normal conditions, which is health. During childhood cellular activity and tissue changes are far in excess of such processes in adults.

Diseases of nutrition place increased burdens upon the kidneys, because when nutrition is at fault there is not only an increased amount of tissue detritus to be removed from the organs of the body, but there is also apt to be a greater amount of unappropriated material to be carried through these so-called "sewers of the system." If these conditions are facts, it necessarily follows that the kidneys will be compelled to endure a greater strain than in health, and, like all overworked organs, men, or machines, will be prone to perform their functions in a more or less faulty manner. It is our duty at all times to aid the kidneys in performing their functions when they are called upon for increased activity. We should also try to prevent abnormal conditions, as well as carefully consider them after their occurrence. This holds good in a pronounced degree when treating diseases of nutrition. It is not enough to note that digestion is impaired, or that the stomach is irritable and almost incapable of performing its functions; it is not sufficient to also observe the character of the alvine discharges. The careful physician should also consider the indications furnished by the renal excretion.

The examination of the urine of young children, being a greatly neglected subject in text-books and journals, is the excuse for calling your attention to it by this paper. It has sometimes been advised to use a small flexible catheter for obtaining the urine. This method is

quite objectionable. A better way is to place a clean flat sponge over the genitals inside the diaper. When it is saturated with urine, the contents can be squeezed into a suitable container, and the sponge re-applied when dry after being washed with water. However, with care, the urine can be obtained direct from children two years old, or even younger.

In urinalysis of such cases, we should remember the urine of infants contains but a very small amount of phosphates. It is much less in growing children than in adults. Therefore, do not consider it an abnormal condition when simply a small amount of phosphates is found.

It is stated, indican is practically absent in the urine of infants. "Excepting primary intestinal or general septic diseases the presence of pathological quantities of indican is indicative of intestinal disturbance."

It is well to remember that an excess of uric acid during the first ten days after birth is not a pathological condition.

In later infantile life, during serious diseases of the digestive tract, we are apt to find deposits of urates and uric acid. Sometimes children from three weeks to two months old will cry out, or strain during micturition, and the urine will leave a darker stain than normal, and the edges of the stain will show a yellowish-pink discoloration, when a careful inspection will disclose a fine sandy deposit. Not infrequently these little patients are unsuccessfully treated for enteralgia. A careful examination of the urine will show urates, uric acid, epithelial cells, and possibly a few pus corpuscles, thereby enabling us to institute the proper treatment. We will not unlikely find that Ferrum phos., or Lycopodium, will afford relief, and the colic diagnosed by the mother or nurse will disappear.

In diseases of nutrition we are apt to find a deficient oxidation of tissue, so that the products of metabolism stop at uric acid instead of being converted into the more soluble urea. It is considered by some that this lithæmic state is the exciting factor in nutritional disturbances.

At any rate we often find it associated with more or less disturbance of digestion and gastro-intestinal catarrh, or more active inflammation. The nervous system does not escape, and urticaria and erythema are clearly dependent on it, and I am disposed to believe eczema as well. For this lithæmic condition we are apt to find Lycopodium, Mercurius, Sepia, Sulphur, Berberis, etc., the indicated treatment. Not infrequently, in gastro-intestinal diseases of infants, the urine is excessively acid, with a pronounced excretion of uric acid, the meatus irritated, and even the surrounding cuticle inflamed by the irritating discharges. As has been stated, this indicates imperfect metabolism. Although these patients require deep-acting remedies, it is difficult to secure satisfactory results until the character of the urine is improved. A marked beneficial change will often follow the free administration of Buffalo lithia water, but the carefully selected homœopathic rem-

edy should be continued in conjunction with it, lest the relief be but temporary. Whether the lithia water be considered an indicated remedy, a chemical antidote, or a hygienic measure, is immaterial, but it certainly is a valuable aid in treating some intractable conditions, and I think it has saved the lives of some patients for me. I prefer the natural water to that prepared by adding a lithia tablet to pure water, although I would use the latter in the absence of the natural water. Lithium benzoate is sometimes a valuable remedy. According to Shoemaker, "lithium carbonate promotes the assimilation and metabolism of nitrogenous material, and increases the elimination of urea." According to Haig, the changes of elimination rather than formation produce the clinical phenomena. Usually these patients are nervous, excitable children, well developed mentally, bright and active, but they do not sleep well, are not hearty feeders, and take cold readily.

In enterocolitis there is liable to occur a deposit of urates. Under the microscope, this cloudy deposit is seen to consist of opaque globular particles, studded with long sharp spines. This irritating deposit seems at times to cause irritation of the mucous membrane of the urinary tract, probably a mechanical irritation, provoking frequent micturition. A deposit of urates is easily distinguished from phosphates by the fact that it clears up when moderately heated.

Vesical calculi are generally largely composed of urates. When uric acid is present, meats and albumins should be used sparingly, but water ought to be taken plentifully.

Among strumous children we find a tendency to the excretion of urates and uric acid. This is an indication of deficient metabolism, which should have resulted in the formation of urea, but stopped at uric acid. We should not regard this as a renal disease, and direct our treatment primarily at the kidneys, but we should rather attempt to increase assimilation, so that as a more healthy condition of the system is attained the excretions may become normal, and the urine contain urea and no deposit of uric acid, the latter being an uncompleted product.

These conditions are found more frequently among city-bred children than among the rural population. Precocious, bright, high-strung children are much more prone to lithuria than the other type. They are less able to withstand the ills of childhood, and require deep-acting remedies, and reconstructive treatment, to influence the vegetative functions of the economy. I am in accord with Fothergill, who teaches that this tendency to lithic-acid formation, largely dependent on deficient hepatic function, is a legacy bequeathed to the offspring of active, zealous brain-workers. The rush and worry of the city, aggravated by the almost universally excessive meat diet, entails upon the children this condition, to be further aggravated by their excessive consumption of meat. These children are not necessarily strumous, but the tendency is that way. Fortunately they are small feeders, but unfortunately their solicitous parents unwittingly try to

tax their feeble livers by urging a diet which adds to the hepatic burden they bear, and increases the tendency to uric-acid formation. Neither do they drink heartily, although an abundance of fluid is needed to carry off the insoluble uric acid, which ought to have been soluble urea. Although these children are not rugged, but are delicate and neurotic, it is a mistake to try to feed them up, and thus increase their strength and development. We should rather aid the liver by a rather non-nitrogenized diet, plenty of out-door air and sunshine, and instruct their parents to refrain from stimulating their mental activity, but rather endeavor to keep their brains as quiet and unexcited as possible. The remedies should be such as assist the hepatic function and aid the kidneys, so the system will excrete urea, and not urates and uric acid.

The condition of the urine in rachitis does not seem to be satisfactorily worked out. Some writers claim the calcium salts are sub-normal and the phosphates diminished. Some state there is an excess of urates and uric acid, with the appearance of leucocytes, while others hold to the opinion that there is prone to be an excess of the phosphates. Personally, I have had so little experience with this disease that I can confirm neither of these statements. My observation of the urine in rachitis is limited to one very pronounced case, which was carefully but unsuccessfully treated by persistent efforts to find the indicated remedy, and administer a suitable diet. Mal-assimilation was evident, almost complete anorexia, but no great apparent gastric or intestinal irritation. The child was cross, petulant, and wakeful, sleep easily disturbed, averse to being fondled, abdomen not much distended, perspiration not much pronounced, eruption of teeth delayed. There was hyper-acidity of the urine, and at times an excess of urates. Lithia water was given *ad libitum* and the remedies continued, when a satisfactory recovery ensued. The most prominent remedies in rachitis are Calcarea phos. and Ferrum phos.

Phosphaturia does not indicate renal disease, and is of importance only as showing in a general way mal-assimilation. Phosphates occur as crystallized calcium phosphate, amorphous phosphates, or as crystalline ammonio-magnesium phosphate.

In infantile atrophy the urine is strongly acid, contains an excess of urea and phosphates, is liable to show albumin, and is sub-normal in quantity. In leukæmic subjects we may find albumin and leucocytes, with a diminished amount of urea, but expect to find urates and uric acid in excess. In these conditions do not neglect the lithia water in connection with other remedies.

Oxalate of lime is not infrequently associated with nervous and gastric disturbances; it may occur in either acid or alkaline urine. The disappearance of the deposit is usually accompanied with relief of the other symptoms. Without considering remedies indicated by concomitant symptoms, it is well to remember that in oxaluria, nitro-muriatic acid and oxalic acid are apt to be beneficial; lysidine has also been recommended.

The presence of albumin is always worthy of attention, although it does not necessarily indicate an inflammatory condition of the kidneys. It is not infrequently present in cholera infantum, or even in intestinal catarrh, when it is an indication of renal congestion.

The liability of its occurrence in diphtheria and scarlatina is universally recognized and guarded against, but, being foreign to this paper, it will not be considered, except to say that in diphtheria if the urine diminishes in amount, and the microscope shows blood corpuscles, we expect the diphtheritic process has invaded the kidneys, or that nephritis complicates the case.

The diagnostic significance of urinary deposits of children may be briefly stated as follows:

The urates indicate feeble digestive power, or dyspepsia. They may appear from over-worked kidneys, and also from granular degeneration of the kidneys.

Uric acid appears as a result of inactivity of the liver, or defective metabolism. In cystitis there may be a deposit of uric acid. We are apt to find uric-acid deposits in fevers and in rheumatism. In leucocythæmia there is prone to be an excess of uric acid.

Phosphates are liable to appear in excess where there is abnormal tissue waste, or great nervous excitement.

Oxalates indicate an impaired innervation of the sympathetic nervous system, malnutrition, and feeble circulation. They often appear in diseases of the central nervous system; at times they are followed by albuminuria. The oxalates sometimes appear after improper diet.

Albumin appears in nephritis, and often in febrile diseases, especially scarlatina and diphtheria. Any disease causing passive congestion of the kidneys is prone to be accompanied with albuminuria.

Blood is indicative of renal, vesical, or urethral disease. Malarial poisoning sometimes produces hæmaturia. Mucus in excess shows inflammatory action in some part of the urinary apparatus.

Pus indicates an ulceration or cystitis.

Bile usually indicates an obstruction of the bile-duct, but may appear in intermittent fever, or with a disordered liver.

Sugar indicates diabetes, but may occur temporarily in dyspepsia, and with hepatic derangement.

It is well to remember dysuria is not always an indication of vesical disease, as it may originate from a high fever, and the child cry out while attempting to urinate.

Discussion.

N. B. Delamater, M.D., Chicago, Ill.: I first of all want to thank the doctor for presenting this subject. It is a subject that has comparatively little attention paid to it, and yet it is fraught with more good to the patient than almost any other one. How any doctor can treat diseases in childhood without a careful scrutiny of the urine,

without learning what that would tell us by positive analysis, I cannot understand. I do not purpose to talk long on this paper. I do not want to spoil it. It seems to me this is the central thought, the importance of the examination of the urine, and what may be learned from that examination not only as to the diagnosis but as to the elements in the treatment. It is a sure guide for prescribing diet, and a help in prescribing clothing. You will learn here that which will help you to know whether the child is too much or too little nourished, and just what particular element in nutrition is at fault.

Cannot this paper arouse a spirit of investigation to find what is normal urine in a little child? If this can be done, we have made a wonderful step. Efforts have been made in this direction by men who are studying the diseases of the kidneys in older people, and it has opened a wonderful field as a help in the diagnosis in all kinds of diseases, and also as to the treatment in all kinds of diseases.

T. C. DUNCAN, M.D., Chicago, Ill.: I have listened to that paper with a great deal of interest, and could not help but remember back a good many years ago when this bureau was organized. I had some help in doing it. I am glad the doctor emphasizes one point, *i.e.*, the connection between the urine and the condition and activity of the liver. I think if we will keep those two points in our minds we will gain valuable help from this paper. The condition of the urine, as just told you, depends upon the process of assimilation. I make it a point in practice to examine carefully the first urine the child passes, and I ask particularly, When did the child pass urine, and what was the character of it? If the child has a diaper on, I examine that. I want to see what sort of a liver the child has. It is the chief organ in infantile digestion.

Scurvy.

By Charles E. Kahlke, M.D., Chicago, Ill.

Scurvy, scorbutus, or Barlow's disease, is one of the diseases of faulty nutrition which, years ago, used to rank as one of the most formidable maladies to be encountered at sea, in prison, during war, etc.; in fact, anywhere where people were massed together and fed upon an improper quality of food, but which now, thanks to a better understanding of our dietary, is rapidly becoming obsolete except among the very ignorant. Nowadays, we are more apt to find it in infants than adults, because the feeding of the former is not so well understood by the laity as the feeding of the latter.

It was not until 1883 that infantile scorbutus was brought prominently before us, it having been considered prior to that time as a form of rickets.

For a general idea of scurvy in infants we would picture a hyperæsthetic child between twelve and eighteen months of age, with a previous history of prolonged improper feeding, presenting a marked anæmia, though apparently well nourished. Hemorrhages, both superficial and deep, varying from very small macules to extensive ecchymoses, may be found anywhere, especially about the nose and mouth, in the neighborhood of joints and bones, and in the substance of the muscles. The gums especially are the seat of a boggy swelling, and bleed readily on slight provocation. The conditions are largely those found in rickets; in fact, the latter condition is a rather frequent associate. Then, too, the scorbutic nature of the case is made manifest when anti-scorbutic treatment is instituted.

As to the etiological factors, this disease is one where, strange as it may seem, the treatment leads us to the cause, instead of the latter to the former. The very fact that a change to a proper diet is all sufficient to effect a cure would point absolutely to a dietetic error as the cause. It is not the change of the quantity of food ingested that effects a cure, but the change in quality. In older children and adults we find that by replacing to a great extent the nitrogenous foods by the carbohydrates the results are good, *i.e.*, where we find a case subsisting largely on meats, coffee, tea, etc., with some bread, but scarcely any fresh vegetables or fruit, that a substitution of the latter for the former meets the requirements of the system, and is followed by a rapid subsidence of the symptoms.

As a matter of fact, a diet which will introduce great quantities of uric acid into the system, to the exclusion of the carbohydrates, is just what is necessary for the development of scurvy. When we come to

consider it from the stand-point of uricacidæmia, we will find so many points of resemblance between scorbutus and the arthritic diseases that we may feel justified in classing it with the latter, and so establish a relationship between scurvy, gout, rheumatism, purpura, plumbism, etc.

Fabre regards scorbutus as a miasmatic affection which especially affects the joints, but, inasmuch as diet alone in any case not too far advanced, in the presence of almost any environment and in the midst of a severe epidemic of the trouble, effects a cure, we must exclude this theory, though it is true we have many concomitant symptoms arising from ptomaïne absorption incident to intestinal fermentation, etc.

It being a dietetic disorder, the disease is not especially limited by climate, age, sex, or social position, except in so far as the latter would be more apt to determine the variety of diet.

Symptoms.—The symptoms and pathology of each case obviously depend upon the severity and duration of the attack and the constitution of the patient, ranging from a few shifting pains and very slight anæmia to the most profound cachexia and death.

Among the first symptoms ushering in an attack we find pain and tenderness, usually about one or more joints in the lower extremity, though they may affect any joint in the body or the bones and muscles, simulating at times the pains of rheumatism, ostitis, or myalgia, or, if affecting especially the epiphyses of the long bones, a syphilitic epiphysitis. Mental dulness and despondency, with an associated general hyperæsthesia, early mark the influence on the nervous system. Anæmia more or less pronounced in every case, in spite of a sometimes well-nourished or even fleshy appearance, is indicative of the deterioration of the blood, and these blood-changes and changes in the vessel-walls are further evidenced by the hemorrhages which so readily take place from the mucous surfaces of the nose and intestinal tract, from the ear, eye, or kidney, and into the joints and muscles and subcutaneous areas, at times even from the meninges. These hemorrhages, when occurring into the joints, present as typical hæmarthrosis, usually, however, without the history of traumatism; when into the orbit, as exophthalmus and hemorrhagic chemosis; when into muscles and subcutaneous tissues, as ecchymosis, with its varying discolorations, simulating multiple contusions.

Wherever the hemorrhages occur swellings appear, and in infantile scorbutus these changes usually occur in the lower extremities, especially at the epiphyseal ends of the long bones, about the knee and ankle, or, if it be in the upper extremity, about the wrists, sometimes at costo-chondral junctions, resulting in beading of the ribs, thus leading us to think of rickets. The hemorrhages in infants are usually subperiosteal, and may be accompanied by separation of an epiphysis.

The general symptoms of anæmia, besides the objective, are marked, viz., fainting, weakness, shortness of breath, tinnitus aurium, disordered vision, and insomnia. Hæmic murmurs may frequently be heard.

So far as the intestinal tract is concerned we find first a marked stomatitis with a swollen, boggy condition of the gums, with considerable discoloration and tendency to bleed. If the changes invade the peridental structures, the teeth become loose and may fall out. Dentition is arrested, and mastication is difficult. On account of the superficial necroses, and the inability to properly cleanse the teeth, by reason of the pain, the breath becomes foul. On account of the general disturbance, the bowels are almost always constipated, unless ulceration is present, giving rise to scorbutic dysentery. Fermentation takes place when the former condition exists, and the various symptoms dependent upon the absorption of ptomaïnes become manifest.

The fleshy appearance sometimes noticed is due to the accumulation of fat from diminished combustion. The skin, at first dry and rough, usually assumes a muddy, mottled bronze color, due to deposit of pigment from degenerated red blood-corpuscles. Fever may or may not be present. If present, it may range from 1° or 2° sub-normal to 105° or 106°.

Physical examination usually reveals a splenic tumor. The urine is very acid, sometimes albuminous. The normal ingredients, except potash salts and phosphoric acid, are diminished. The blood gives us no distinct picture. In children we find an increase in the number of young white cells (lymphocytosis). The amount of hæmoglobin is diminished, though the number of red corpuscles is scarcely affected. The leucocytes are generally increased. Post-mortem examination reveals, in addition to the points mentioned above, parenchymatous degeneration of the heart, liver, and kidneys.

Now, so far as *diagnosis* is concerned, allow me to quote Barlow, one of the first to call our attention to scurvy in infants. He summarizes the chief features as follows:

"1. Predominance of lower limb affection.

a. Immobility, going on to pseudo-paralysis.
b. Excessive tenderness.
c. General swelling of lower limbs.
d. Skin shiny and tense, but seldom pitting, and not characterized by undue local heat.
e. On subsidence revealing a deep thickening of the shaft.
f. Liability of fracture near the epiphyses.

"2. Swelling of the gums, varying from definite sponginess down to a vanishing point of minute transient ecchymoses."

These constitute the chief diagnostic differentia between infantile scurvy and rickets, properly so-called. But to them must be added, as the most important diagnostic of all:

"3. Definite and rapid amelioration by anti-scorbutic regimen."

Gee claims (Osler) that hematuria may be the only symptom of scurvy in children.

In differential diagnosis we must consider rickets, purpura, rheumatism, syphilis, and infantile paralysis.

Rickets is fully discussed in another paper, so suffice it to say that it lacks the hyperæsthesia, hemorrhages, changes in the gums, and the response to an anti-scorbutic diet.

Purpura has not the spongy gums, painful swellings, nor the profuse hemorrhages, though the latter are more numerous and superficial. The vital powers are not so depressed, and the muscular swellings are absent.

When we come to consider *rheumatism* we must remember what Holt says, viz., that the extreme infrequency of rheumatism during the first two years of life should always make one sceptical regarding it. In an infant, when the symptoms are confined to the legs and are not accompanied by fever, they are almost certain to be due to scurvy, even though the gums are normal and ecchymoses have not yet appeared. Then, too, in rheumatism we frequently have a family history of rheumatic affections and chorea, tonsillitis, torticollis, erythema, endocarditis, etc.

Syphilis resembles scurvy in the early appearance of pain, apparent loss of power, with the later appearance of swellings and signs of inflammation at the epiphyseal junction; but syphilis usually appears shortly after birth, and has a family history of same, and is relieved only by anti-syphilitic treatment.

If the characteristic symptoms of scurvy are lost sight of, we may confound its pseudo-paralysis with *infantile spinal paralysis* in the early stages, but the diagnosis of paralysis may safely rest with the character of the electrical reactions. The atrophied muscles here very soon begin to lose their power to respond to faradism. Reaction of degeneration is uniformly present.

Now, inasmuch as the anæmia, joint pains, hemorrhages, and splenic enlargement, can all be explained, according to the logical reasoning of Haig, on the basis of an excess of uric acid in the blood in proportion to the amount of urea, we are justified in classing scurvy with the arthritic diseases in general.

Loomis, Osler, and Strumpell also connect the hemorrhagic disturbances of the skin with rheumatism. We are further justified in making this classification by the undeniable fact that the treatment so effective in, and so diagnostic of scurvy, is essentially that used in the treatment of cases of uricacidæmia.

So far as *prognosis* is concerned, we consider it very favorable where the classical treatment can be instituted before the case has advanced too far.

Death, when it occurs, is usually due to exhaustion, weak heart, hemorrhage, general dropsy, pulmonary œdema, dysentery, or inflammation of one or more of the serous membranes.

The *treatment*, as we have said before, consists in the prevention of the further introduction of uric acid into the system, the elimination of the excess already present, and the administration of fresh vegetables, lime, lemon, and orange juice. The diet otherwise should consist of milk, rice-pudding, oatmeal, milk-toast, jellies, cooked

fruits, etc. As the symptoms begin to disappear, eggs and beef may be administered in very moderate quantities. For infants, all that is necessary is to change the diet from the prepared food to fresh cows'-milk, so altered as to duplicate as nearly as possible healthy mothers'-milk, or, better still, provide a healthy wet-nurse.

Of course the indicated remedy should be given in every case according to the symptoms. Prominent among these we find: *Phosphorus, Arsenic, Mercury, Nitric* and *Muriatic acid, Sulphur, Carbo veg.*, and *China.*

Tonics should be given also in accordance with the individual requirements. The constipated bowel should be relieved by enemata, and, where the mouth symptoms are marked, astringent and antiseptic mouth-washes should be used.

Rachitis.

By W. A. Humphrey, M.D., Plattsmouth, Neb.

Rachitis is a disease of infancy and early child-life, dependent upon malnutrition and malassimilation, the results of which are manifested in the bones and bone-producing tissues, supplemented by certain phenomena in the vegetative, nervous, and muscular systems.

Causation.—The causes contributing to the development of rachitis are numerous. Children born of unhealthy parentage, upon whose constitutions are implanted the tubercular or syphilitic taint; whose nutrition is impaired from disease or from overwork and care, or who are under-fed, are productive of unhealthy progeny in whom disease finds ready soil for its development. Mothers who nurse their children through the second summer, or whose milk is in any way impoverished from ill-health, or defective nutrition or assimilation, or bad hygienic surroundings are not proper individuals to assume the responsibility of maternity. The nutrition furnished to the child and its proper assimilation by it is, perhaps, the most important consideration in the production of this malady, yet the lack of proper food is not alone sufficient causation for its production. Children of all classes of parentage, whether rich or poor, and even when well fed, are by no means immune. It is true that babies nursed at the breast during the first twelve months are less often attacked than those brought up by hand, and when they are attacked the type of the disease is much less severe. Over-feeding with the best selected diet, to say nothing of unwholesome food, such as starch, potatoes, pork, and raw fruits, relatively to the age of the child, tend to irritative dyspepsia, and indirectly, to defective and irregular bone development. The fact that many properly fed, and properly clad children, and children of healthy parents develop rickets, while many improperly fed and improperly clad and of unhealthy parentage do not develop it, is proof that there is still a causative factor beyond these, which must be made operative to render them active in the development of the disease. Lack of fresh air, sunlight, and exercise, and the crowding together in unwholesome quarters in tenement districts of large cities, with persistent lack of animal fat and the proper proportion of saline ingredients in the food, adding to these the exposure to variations in temperature consequent upon such surroundings, make the development of rachitis easy.

Anatomical Changes.—Rickets usually shows itself during the first two years of life, commencing often *in utero.* "The most characteristic

change is the increased formation of vessels in bone which is apparent even in slight attacks" (Keating). The cartilage canals are widened, the vessels within the canals also enlarge and eventually deposit bone-making material in the cartilage, which is deposited in an irregular manner, contrary to the regular straight lines of normal calcification in cartilage. Kassowitz says, "much of the organic part of bone has been laid down without the lime. The increased vascularization results in the deposit of loose, spongy tissue in the vicinity of the vessels, which is deficient in lime, and which continues until the end of the developmental stage. When involution begins the vessels diminish in size, and around them is deposited new bone. The spongy tissue is hardened by a condensing osteitis." The poverty of lime found in rickety bone is not conclusive evidence of its causative influence in producing the disease, since it is impossible to reduce the supply in the food to the proportion found in the deposits of extreme cases of rickets, and since its administration alone as a therapeutic agent fails to prove curative. The red corpuscles are always below normal as well as the hæmoglobin. The leucocytes are at variance with the normal. The specific gravity of the blood is below normal.

Thomas Barlow, reviewing the facts disclosed by a study of the morbid anatomy and etiology, concludes: "That proliferation of cartilage, with the associated increased vascularization, must be regarded as pathognomic of rickets, softening of bone being a more variable and less distinctive feature; that histologically it is impossible to distinguish such a condition from that met with in the early stages of an ordinary inflammation; that we have to deal with an irritative overgrowth of ostogenetic tissue, and that this and not deprivation of lime is the primary factor in the disease. Whatever the irritant causing the overgrowth, it is quite certain that it is easily developed in early life. For if one fact stands out more prominently than another in the pathology of rickets it is this, that almost any injurious influence brought to bear on a child during the period of most active growth tends to produce it: a chill to the surface, inhalation of noxious gases, assimilation of ill-digested fluids, etc., may develop an irritant in the blood which acts on the tender walls of the young vessels in the growing parts of bone."

Symptoms.—Among the early manifestations are the beads, or "rickety rosary," at the juncture of the ribs with the cartilage. These may be the only distinctive symptom of the disease, and yet they are of such importance as to warrant a diagnosis. A child with a previously healthy record, who becomes irritable, develops a diarrhœa, accompanied by convulsions, should place the attendant upon guard, and a careful search should be made for beads upon the ribs. The larger number of these cases end in rickets. The percentage of children subject to convulsions, who develop rickets, is very large, especially those who have laryngismus stridulus, which, indeed, is so often based upon a rachitic origin that it always is well to regard every case of it with suspicion as to its causation. The aspect of the head is altered.

The antero-posterior diameter is elongated, the outline is polygonal in contrast with the circular outline of the hydrocephalic. In others, lack of symmetry prevails. The bones are thin, often crackling like paper under the accoucheur's hand at birth. Generally speaking, the child is emaciated, yet the opposite condition is occasionally observed, and we have "fat rickets," which is easily overlooked in its early stages unless we search closely for the beads; their presence, together with laryngeal spasms at night, warrant the diagnosis. As the disease progresses and the strength wanes the ribs and spine project backward in a rounded manner in contrast to the angular projection in kyphosis from caries. Lateral curvature often finds its cause in rickets. The general weakness of the body allowing it to incline in any direction which may have an irritation, such as pleurisy, as a starting-point.

The aspect of the limbs is most markedly altered at the wrists; the radius and ulna being larger than normal at the junction area of the epiphyses, which also become enlarged. The changes in the other long bones are similar, depending largely upon the severity of the attack. If it be severe and occur early, before the child walks, the bones of the arms will be bent, owing to the weight of the body being supported upon the palms of the hands as the child sits. The same is true of the lower limbs when the child walks, being greatest in the direction of the superimposed weight. A tenderness of the limbs is a prominent symptom later on, which is, no doubt, a bone tenderness, though it may be shared by the poorly nourished muscles. Fever is absent in some and present in others, especially when there are present catarrhal conditions which often complicate the disease, manifested in bronchial or intestinal irritation.

Rickets is by no means a rare disease. The general practitioner in smaller towns sees an occasional case only, while in larger centres of population it is classed as one of the frequent diseases. Some hospital records show the percentage to be as high as thirty. Rickets, of itself, is rarely fatal, but fatalities are frequent from complications. Where recovery occurs only minor deformities disappear, while grave ones persist and stamp the victim as having been rachitic the rest of his lifetime.

The Medical Treatment of Rachitis, including Prophylactic and Dietetic.

By C. H. Cogswell, M.D., Cedar Rapids, Ia.

"Whatever tends to induce debilitated or anæmic conditions of the mother, either during utero-gestation or the period of lactation, may bring the child into a state of faulty nutrition, either before or after birth, and so contribute to set up the Rachitic Slab." Professor Edmonds was perfectly correct in the above statement as I view it, and I venture this assertion: *Give me the care of the mothers and I would revolutionize the world.* In order to properly treat rachitis it is necessary to begin ante-partum. Place the mother in the most favorable sanitary conditions; pure air, and pure water, with pleasant and cheerful surroundings; reasonably free from care and fatigue. She should be pleasantly employed mentally as well as physically, with good wholesome food containing plenty of bone-producing elements, even though she might suffer some during labor. I believe the fad of eating freely of lemons daily during pregnancy to produce painless labor to be the cause of many evils; such diet tends not only to weaken the mother, but certainly the child, and may produce rachitis. I would use for the mother during pregnancy, massage, calisthenics, and oil baths, to bring her system as near a state of perfection as possible. A few weeks after labor the breast milk should be examined and if not up to standard, so change the diet as to improve it; if not successful, wean the babe. My first preference in the way of food for the little one, after weaning, is cow's milk, or rather, the cream from milk that has stood several hours, diluted with water hot enough to melt the fat globules, and not hot enough to scald it, using five parts of water to one of cream. If this disagrees, then Horlick's Malted Milk, or other foods as seem best suited to the case. When the child reaches the age of eight months, I recommend a little bouillon or mutton-juice, with bread, also oatmeal and cream to strengthen the physical system. This for a diet.

Following the first month, I advise that night and morning, the entire clothing be changed, and in place of a bath the child be thoroughly rubbed with the hand. As soon as the muscles begin to shrink, the skin to become dry, I then use oil rather freely, externally, and continue the friction with the hand, which I hold indispensable to the successful treatment of the case, for a great amount of vitality can thus be imparted, especially if a loving mother's hand is the one employed.

Bathing only semi-occasionally.

An abundance of out-door air, if it be seasonable, is much to be desired.

While I do not presume to speak of the dress, I cannot refrain from mentioning the necessity of such flannel clothing as is required to protect and not burden the little one. The happy medium is most desirable; the extreme either way is detrimental.

The remedies particularly indicated are: Calcarea carb., Calcarea phos., Silicea, Sulphur, and China, although Aconite, Nux vomica, and Chamomilla are frequently called into use.

Undoubtedly some cases are due to a psoric condition, and Sulphur or Psorinum will be required, the latter especially when the child suffers from pains in the extremities with swelling of the feet and legs. During the precursory symptoms Aconite is indicated, when there is a quick, irritable pulse, with more or less heat of surface, with dry skin. Chamomilla with much restlessness or irritability, loose stool, usually green, and containing more or less mucus. China when the child is suffering from exhaustion, caused by non-assimilation of food, indicated by undigested stool, loss of flesh, and coldness of the surface of the body.

The principal remedy in rachitis, by which great things are expected, is Calcarea carb., especially when the child has prominent forehead, with large, open fontanelles and sutures, blueness of the veins, attended with tardy dentition, profuse perspiration, particularly about the head and neck, inability to hold the head erect, great muscular weakness, also sour odor about its person. Calcarea phos. may be given if no improvement follows the use of Calcarea carb., especially if there be much cerebral irritation, attended by a low, weak, plaintive wail. Aconite, China, and Chamomilla I use in the third potency, the other remedies mentioned in the 1,000 or higher in order to obtain the best results.

REPORT

OF THE

SECTION IN OPHTHALMOLOGY, OTOLOGY, AND LARYNGOLOGY.

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Eye Conditions Diagnostic in General Diseases.

By D. A. MacLachlan, M.D., Detroit, Mich.

This is a practical age. The day is past when mere courage, daring, or heroism wins battles; Admiral Dewey gloriously demonstrated at Manila, that science (brain, practice, and precision) is necessary also.

Just so in the battle against disease. The day is past when mere bluff, swagger-belly, sonorous voice, and butcher hand made a surgeon; or, when mere assumed dignity, mystery, a lancet, and a pill-bag made a physician. Science is necessary, and skill also. I think it was Oliver Wendell Holmes who said in effect, "Science is fine furniture for the upper story if there's common-sense on the ground floor; but without common-sense in the first story, the more science in the second, the worse for the patient." "Knowledge is power" if well wielded. Medical science we must have, but skill to apply it is the essential to success.

Surgery and therapeutics have been wedded since time immemorial, and, "what God has joined together let no man put asunder." There are those to-day who would divorce them, but there is not judge or jury under heaven that can separate them, for they are bound by an indissoluble tie. What is the enduring link that has held and will ever hold them together? It is the art of diagnosis, for by it only do we know whether surgery or therapeutics is demanded in a given case, or whether, if the physician has charge, the time has come when the surgeon should be called.

The day has passed when the doctor can look wise, say nothing, prescribe on the totality of symptoms, and preside over the feast, or funeral, that results. The handmaids of medicine, hygiene, and sanitation, to say nothing of educated public opinion, render it no longer possible to shirk a diagnosis, if that be possible. The patient is not the only one considered; his relatives, his neighbors, and even his fellow-citizens must be protected. Hence, a diagnosis is imperative, and whether or not the surgeon is to be required, and whether or not in our opinion, ourselves and our patient need it, we may as well prepare to diagnosticate, for "the law allows it, and the court awards it."

We shall have need, then, of every means that science or art has placed at our disposal. Even the generally disregarded adjustments and appearances of the eye, may be worthy of our observation and study for this purpose. We shall find, perhaps, that a look through these "windows of the soul" will reveal the lurking-place of many an interloper and disturber in the temple made for man, the Creator's own image and best handiwork.

It is, therefore, the hope of the writer to direct your thought and attention to this unique and indispensable organ, as a means of deciphering the signs of destruction and disorder in the complex structures of gray matter and white matter, of neuroglia, cells, fibres, and axis-cylinders, that go to make up that mysterious and wonderful mechanism called the nervous system. Inasmuch as this latter controls and regulates, excites and inhibits every organ and tissue, every thought and action of the human being, we are likely by its manifestations to learn the cause, character, and location of many of the injuries and diseases that humanity is heir to. Of necessity I must be brief, and, therefore, can only refer to a few of the general diseases to which the eyes may furnish a clew, even if they do not tell us all we seek to know concerning the whereabouts and evil designs of these lurking foes of human kind.

Beginning with the external portions of the eye, a good many suggestions and signs of general disease may be noted. Inability to close the lower eyelid, denotes paralysis of the orbicularis, due to lesion of the facial nerve, such as tumor, otitis, specific disease, injury (parotid), etc. Ptosis or drooping of the upper lid alone, indicates a cortical nervous lesion, located just in front of the anterior central convolution, or hysteria. Bluish circles occur from menstruation, injuries of the eyes, etc., and pigmentation of the lids denotes hepatic or uterine disorder; brown patches on the lids point to Addison's disease. Œdema of the lids points to heart or kidney disease, drug poisoning (arsenic), and trichinosis, in which it is not only an important, but often the first objective symptom. Congestion or inflammation of the lids denotes eye-strain usually, but gastric, uterine, and ovarian disease also.

Yellow conjunctiva tells even a layman of liver derangement, as extreme pallor does of anæmia or cachexia. Conjunctival extravasations of blood in old persons denote atheromatous degeneration, and often precede apoplexy; in the young it occurs in whooping-cough, after epileptic paroxysms, etc. Phlyctenular ulcers of the conjunctiva, or cornea point to some dyscrasia, or low vitality, due to struma, and infectious or septic diseases, tuberculosis, and eczema (especially nasal), delayed menstruation, etc.

The cornea presents several diagnostic appearances. The arcus senilis, the gray line about the edge of the cornea in older people, is often a sign of fatty degeneration of other tissues, and is associated with fatty heart. Neuro-paralytic ulcer of the cornea denotes a lesion of the trigeminus, from disease of the nerve itself, syphilitic deposits, or fracture of the skull. Xerosis, or dryness of the cornea and conjunctiva, is also sometimes due to affections of the trigeminus, but is more often seen in children with severe diseases, such as scarlatina, measles, typhus, and cholera infantum, and in adults with jaundice. It usually denotes impending death, and its disappearance marks improvement. Interstitial inflammation, or infiltration of the cornea, is the chief diagnostic sign of the cornea; it indicates inherited syphilis in about

seventy per cent of all cases. It occurs between the ages of six and twenty years, is always chronic, and generally accompanied by other familiar signs of congenital syphilis, viz., peculiar formation of the face and skull. Hutchinson's teeth, deafness, enlarged glands, swelling of the periosteum, etc. Occasionally it is observed in acquired syphilis, and more rarely still in scrofula.

The iris affords a vast number of indications of general diseases, particularly in the domain of the nervous system. Ordinarily irides are alike in color, and brilliant in lustre. Dull, sluggish iris is an early sign of inflammation, which is usually a manifestation of congenital syphilis in children, as iritis is a disease of adults. In the latter it is indicative of rheumatic, scrofulous, or tubercular diathesis, or of specific disease, a very large per cent. of all cases being due to acquired syphilis. It should not be forgotten, however, that traumatism, infection, and extension from other parts account for many cases, and that an irregular appearance of the iris is often due to previous inflammation with adhesions (anterior or posterior synechiæ), or, to congenital defects, such as coloboma, persistent pupillary membrane, etc. A tubercle, or papilla, in the iris is almost always a syphilitic gumma.

It is in its movements, however, that the iris does us the greatest service in diagnosis. Normally the pupils are equal in size, and inequality is always pathological. They contract equally when light enters both eyes, or only one eye (consensual reaction), and a failure to do so indicates blindness; it is, therefore, a very valuable diagnostic sign in many conditions.

The pupils contract from the following: stimulation of the optic, or motor-oculi nerves, or of their centres; paralysis of the sympathetic nerve; accommodation and convergence; fulness of the iritic vessels; and effects of certain drugs (miotics). And dilate from: paralysis of the optic, or motor-oculi nerves, and injury, or destruction of their centres; stimulation of the sympathetic; sensory or emotional stimuli; anæmia of the iritic vessels, and effects of drugs (mydriatics).

Of pupillary signs in diseases of the nervous system, it may be stated that they are present only when the lesion is above the junction of the sympathetic with the spinal cord. It may be said, also, in a general way, that dilatation of the pupils indicates pressure on the brain, contraction indicates irritation; dilatation occurs more often in brain disease, contraction being the rule in spinal lesions. Spinal disorders with dilatation point to simple irritation (stimulation of sympathetic); spinal symptoms with contraction point to a destructive lesion (paralysis of the sympathetic).

The state of the pupil often furnishes us with the first clew to brain or spinal diseases, and as cure so frequently depends upon treatment being begun early, the importance of the knowledge of pupillary indications may be appreciated.

Dilatation is caused by hemorrhage, abscess, tumors, and injuries of the brain, meningitis (late stage), hysteria and epilepsy (late stage), melancholia, anæmia, trigeminal disease, eclampsia (uræmia), diph-

theria, whooping-cough (marks the change from catarrhal to convulsive stage), diffuse encephalitis, trichinosis, exophthalmic goitre, and by the following poisons: Aconite, Amyl nitrite, Atropine, Belladonna, Bromide of potash, Cocaine, Carbonic acid, Cyanide of potash, Duboisine, Daturine, Ergot, Ether, Ethyl nitrite, Gelsemium, Glonoin, Hyoscine, Hyoscyamine, Oxalic acid, Stramonium, and various ptomaïnes.

Contraction of the pupils is caused by insanity, paretic dementia, epilepsy, or hysteria (early stage), locomotor ataxia, multiple neuritis, sleep, dyspnœa, sclerosis, and by the following drugs: Eserine, Curare, Chloral, Chloroform (dilatation denotes impending asphyxia), Iodoform, Muscarine, Pilocarpine, Physostigmine, Opium, Tobacco, etc.

Miosis and inequality of the pupils is characteristic of tabes, hysteria, neurasthenia, etc.

Reflex rigidity of the pupil is diagnostic of bulbar paralysis, sclerosis, and paretic dementia. A paradoxical reaction of the pupil, dilatation in the light, and contraction in the dark, is recorded from poisoning by coal-gas and illuminating gas. Hippus, or rapidly alternating contraction and dilatation of the pupil, is a symptom peculiar to hysteria and a few irritative brain disorders.

Contraction is the rule in the early or irritative stage of inflammatory affections of the brain and its membranes, as well as of cerebral tumors, hysteria, epilepsy, and similar conditions.

Laminated cataract is a sign of rickets.

Affections of the voluntary ocular muscles often assist greatly in locating brain lesions; they consist of either spasms or paralysis. Mere irritation of the visual centres causes spasm, while destruction of the same part causes paralysis. Many times spasm is only the first stage of paralysis, and one is usually as important as the other in locating the disease. In apoplexy, the head and eyes are both turned toward the side of the lesion (conjugate deviation), and relaxation from this position, especially if the head and eyes can be turned to the opposite side, denote recovery. Conjugate deviation is common in cerebral abscess also, and, in the course of either apoplexy or abscess, if fresh irritative brain symptoms (spasm and paralysis of various sorts) supervene, it denotes rupture of blood or pus, respectively, into the ventricles.

Irritative symptoms (spasm, twitching, nystagmus, miosis, conjugate deviation, etc.) first, and, later, paralysis mark the gradual growth of cerebral tumor; the same may be said of basilar meningitis, before and after exudation has taken place, and of cerebral hemorrhage and other cerebral conditions that are progressing during minutes, hours, or days; symptoms at first irritative becoming paralytic as the growth or extent of the lesion increases. Nystagmus, a rather rare symptom in brain disease, ordinarily, is so common in multiple sclerosis as to be diagnostic. The nystagmus is due to interruption of conduction between the oculomotor cortex and the nuclei of the ocular muscles, and hence locates the lesion. The parts of brain involved are, cortex (centres of highest rank), nuclei (centres of lowest rank), the

nerve-trunks (basal), or the bands of fibres connecting nuclei with nerve-trunks.

The following table may assist in diagnosing the site of lesions, while other associated symptoms may explain their character:

Muscles or Nerves Paralyzed.	*Site of Lesion.*
One muscle only (of oculomotor).	Below the nuclei. (Except ptosis, which may be cortical.)
Conjugate paralysis, or deviation (lesions of associated centres).	Crura cerebelli, pons, corpora quadrigemina, and great ganglia of brain (optic thalamus, etc.).
External ocular muscles alone (accommodation and convergence retained).	Nuclei (floor of 4th ventricle). (Excludes basilar lesion.)
Abducens and facial together.	Probably nuclear.
Oculomotor of one eye, with opposite extremities.	Pedunculus cerebri.
Abducens and facial with extremities.	Posterior part of pons.
Whole series of cranial nerves. { 3d. 5th. 7th. Optic. Olfactory. }	Base of brain.
Beginning as neuralgia of 5th.	Base of brain.
One optic nerve (unilateral blindness).	Base of brain below chiasm.
Ophthalmoplegia with { Orbital pain or tenderness. Deep seated tumor. Protrusion of globe. Optic neuritis one side. History of trauma. }	Within orbit (extra cranial).

Hemianopsia, or loss of one-half of the visual field, without the opthalmoscope showing any changes in the fundus, enables us to locate a lesion of the optic tract. If the defect is for one eye only, the lesion must be in the optic nerve itself, in front of the chiasm. In temporal hemiopia (loss of both outer fields of vision) the lesion is in the chiasm itself, the decussating fibres being destroyed. In homonymous hemiopia the defect is symmetrical, *e.g.*, loss of outer half of one eye and inner half of other, the lesion must be above the chiasm. If in addition the pupil doesn't react when light is thrown upon the blind portion, the lesion is in the optic tract, below where the fibres are given off to oculomotor nucleus; but if the pupil does react, the lesion must be above this point, in the thalamus, etc., or even in the cortex.

Optic neuritis, or inflammation of the optic nerve, is rarely a local disease, and, therefore, its diagnosis is of the highest importance to both the oculist and the general practitioner, as it is an index to so many general diseases. The field for diagnosis of all the conditions previously mentioned is as open to the physician as to the oculist, but in this, skill and experience in the use of the ophthalmoscope are required, and the specialist will usually need to be consulted. Neuritis should

always be suspected in the course of nervous affections if the pupil is dilated and vision disturbed, while otherwise the eye seems normal externally.

In the course of brain diseases optic neuritis is brought about by pressure on the nerve within the cranial cavity, producing simple engorgement of the papilla (choked disk); or, by direct transmission of the inflammation from the brain along the nerve and its sheaths (neuritis descendens). Cerebral tumors and hydrocephalus cause the former by gradually arrogating to themselves space in the cranial cavity, while the latter is usually due to meningitis. Other causal diseases are: cerebral hemorrhage, embolism, thrombosis, abscess, and injuries; paretic dementia, and multiple sclerosis; syphilis, Bright's disease, diabetes; acute infectious diseases, such as typhus, scarlatina, measles, small-pox, and diphtheria; scrofula, disorders of menstruation and pregnancy, acute anæmia, lead, and other drug poisoning, and taking cold.

In the form of choked disk it is almost pathognomonic of cerebral tumors, being present in about ninety per cent. of all cases. An examination of the fundus even in the early stage of tumor will frequently enable a diagnosis to be made. The inflammation may appear early or late, but if late, it indicates that the growth is increasing, and the prognosis is bad accordingly. Choked disk is generally bilateral, but one eye is often affected first. It develops quickly, as a rule, and after weeks or months is followed by atrophy of the nerve, and more or less permanent blindness.

Simple atrophy is frequently an early symptom of locomotor ataxia, and along with the Argyle-Robertson pupil (no light reaction, and miosis) and absence of the patellar reflex, makes an early diagnosis of tabes possible. It occurs also in other affections of the cord and brain, and is almost always bilateral, but may not begin in both eyes at the same time.

Impaired vision and inflammation of the retina are sometimes the first signs discovered of kidney lesions. Sudden loss of sight with retained pupillary reactions, in adults, and during pregnancy, should lead to an examination of the fundus and of the urine, at once. Retinitis, with the characteristic yellowish-white patches about the fovea centralis, would diagnose Bright's disease. Retinal hemorrhages, too, are significant, as they so often precede apoplexy, especially in aged persons.

Disseminated choroiditis with cloudy vitreous is diagnostic of syphilis. Sudden blindness occurring in one eye, with a cherry-red spot at the fovea centralis, means embolism in the central artery of the retina and permanent blindness, and usually points to heart disease. Pulsation of the retinal arteries, synchronous with the radial pulse, and alternating with the retinal veins, is a sign of aortic insufficiency, and, rarely, also of mitral disease.

Protrusion of the eyeball forward is a well-known sign of Graves's disease; also of aneurism of the internal carotid (pulsating exophthalmus), and of paralysis of the recti muscles.

The eye furnishes some diagnostic signs even in the dead. Opacity and insensibility of the cornea, absence of the pupillary reaction to light, the so-called sclerotic patch, a desiccated spot to the outer or inner side, or below the cornea, and xerosis of the conjunctiva and cornea, develop very soon after death, and denote almost unmistakably that life is extinct.

Discussion.

W. R. King, M.D., Washington, D. C.: The paper which we have just heard by the chairman, which has been prepared and delivered in lieu of a presidential address, is one that is very difficult to discuss in the sense in which we understand discussion. The trouble is I cannot find any fault with it. I like to have an opportunity to discuss a paper differently, one I can take some exception to in some of the statements contained therein, but in this one I do not think I can make a single exception, at least not of any marked importance. It is a paper that has been written and is well designed for presentation before the section of the Institute proper, and that I consider to be the province and duty of this section perhaps more than any other in the Institute. It is a well-known fact that for years the Section of Ophthalmology and Otology in the Institute has been of little interest to the average physician, the general practitioner, owing to the fact that the members prepared papers of such a nature that they were not interesting to the general practitioner, not sufficiently so to hold his attention, and insure his presence in the room during the session of the Section. It seems to me papers ought to be prepared of such a nature that they are not only directly interesting, but such as can and will be discussed by the general practitioner, especially he who pays any attention to eye and ear diseases. Therefore a paper of this nature, which takes up the eye and deals with it as a diagnostic factor, must of necessity be of great value, and appeal to the mind of the general practitioner where the diagnosis of a given disease is difficult to determine, and wherein often, as we have seen in this dissertation, the eye is a guide to a clear diagnosis. Therefore, I can only speak in commendation of the paper presented to a body like this.

There were several little points in the paper which I wish to briefly notice. In speaking of the cornea and the arcus senilis, frequently met with in the aged, and not prone to various periods of life, he said that it frequently—I think that was the word he used—that it frequently indicated general fatty deposit. This I do not think is always the case. I have seen numerous cases of arcus senilis begin early, and continue to a good old age with no appreciable fatty degeneration. One of the conditions most frequently met with by the eye diagnostician, one of the most important and most frequently met with among general diseases, viz., the dreaded Bright's disease, nephritis, is the frequently early developed albuminuric retinitis. It has been possible in my practice to anticipate the diagnosis of this

dreaded malady before there was any other sign manifest, or at least any other sign that would be considered at all satisfactory. I remember a case occurring in my practice in the dispensary service at Washington, where a woman presented herself for treatment. Upon examination a marked albuminuric deposit upon the retina was discovered. She was immediately referred to the general medical department, where an examination was made with reference to the eye condition, as I requested an examination of the urine. The patient was sent back with the report that there were no signs of disease present. The urine was normal. However, I was very sure of my case, and in six weeks, or certainly not longer than two months, it was possible to demonstrate the presence of quite a number of the urinary features of the disease. The woman developed a very malignant and obstinate form of the disease, and was buried within a year. Several instances have come under my notice, but that was the most convincing one.

The object of the session is to have these papers discussed from various stand-points. I discussed this paper from the stand-point of the specialist; that is my position before the society, but I believe much more can be made out of the discussion from the stand-point of the general practitioner.

N. B. Delamater, M.D., Chicago, Ill.: I will not for a moment undertake to take the place of the other doctor. I want to say in regard to this paper that if any man ever kept his promise to the Institute, Dr. MacLachlan has certainly kept his, in regard to his own paper anyway. He has presented a paper here that is of interest certainly to every practitioner of medicine, no matter in how small a town he may be, or no matter how small his practice may be. It is hard to find a practitioner who cannot find almost daily use for a paper of this kind, and I believe there should be presented before this Institute from each bureau, year after year, two or three papers of this general character; we would soon have a large and appreciative house at our meetings. I remember a paper that was prepared and read before our Chicago association by Professor Gurnee Fellows, in which he presented to us some very handsome pictures of the parts of the retina in different diseases. I remember the paper created a great deal of enthusiasm among the specialists and among the general practitioners who were present. I have known a number of instances in which the general practitioner has seen slight indications of disease, as shown in the eye, and has called upon a specialist to see whether these things were present, and has thus been enabled to diagnose his case very much earlier than otherwise, and I know there are a few instances in the experience of every practitioner where the knowledge presented in a paper of this kind would have resulted in marked benefit to his patients. A paper of the kind presented here to-day, when ready to take its place in the Institute Proceedings, could be put in a little pamphlet, and laid upon the desk of every general practitioner, and

would be one of the most convenient references he could possibly have. You can scarcely imagine, until you have picked up these little things the eye tells us, of how much value the eye is in the way of diagnosis. How do we make out the diagnosis? We take every kind of symptom we can find. Each of our patients tells us of some little symptom from which we judge of the general pathological condition, and the man who makes the best diagnosis, the one who is going to be the most successful in his treatment of the case, is the one who gives just the right amount of weight to every little thing in his case that may be of value in his diagnosis. He finds there are certain conditions which indicate, possibly, locomotor ataxia, but he may be not quite sure of his case. He looks at the various things and makes his various tests, and perhaps he finds the conditions of the eye do not at all agree with the other conditions, and he begins to develop a little fear and doubt in his mind whether it is a case of ataxia or not. On the other hand, if certain eye symptoms are present it must be ataxia. I saw a case a few days ago in which a woman told me her husband had ataxia, because he had double vision. Now there is danger of going to the other extreme, and if we find it double in some people, with partial atrophy of the optic nerve and all the other conditions a little less positive, we may have a case of diplopia, and this will make us more positive of the condition than anything else, and we would be perfectly safe in going before any physician with our diagnosis.

A. B. NORTON, M.D., New York: I cannot say one word in regard to this paper. The preliminary words of the president before reading his paper as to the invariable habit of the general practitioner of leaving the room as soon as the eye and ear subjects are presented is, I believe, because the subjects are not properly taught in our colleges. The subject of the eye and ear is not given the same attention as that of gynecology and other departments of medicine, of which the general practitioner has a far better knowledge than of the eye and ear. That, in my opinion, accounts for the great lack of interest that is shown in this section. The special papers on this subject should be made of interest to the student, and put in an attractive form. In the eye we all recognize a very important factor in the diagnosis of disease, and the general practitioner, who is posted on the eye, will cure a great deal larger percentage of his patients, and, therefore, we ought to make these papers of such interest that they will attract the attention and be of benefit to the general practitioner.

L. D. ROGERS, M.D., Chicago, Ill.: I make no special claim to knowledge of the eye, but I do want to record my appreciation of this paper. I hope it will be put in pamphlet form, as the doctor suggested, and every practitioner who wants to make himself familiar with every point in diagnosis will commit this paper to memory. I have come to regard optic neuritis as a positive, almost conclusive diagnosis of cerebral tumor; again the pupil has helped me out in locomotor

ataxia. I was called upon in court once to give my opinion as to whether an old man, sixty-eight years of age, was responsible for the murder of his wife, whom he had stabbed thirty-eight times while she was asleep. I pointed out the arcus senilis to the judge and jury, indicating that with other symptoms it positively confirmed a case of senile dementia, and, notwithstanding the determination of the press and prosecution to hang the man, that one symptom was instrumental in sending him to the penitentiary for the insane instead of being executed.

Ocular Muscles.

By Charles Leslie Rumsey, A.M., M.D., Baltimore, Md.

There is no subject in the whole range of modern surgery that has required any greater study by the writer than this one. To what extent can glasses overcome muscular error? When to operate and when not to operate on a muscle? Shall a tenotomy be performed or its opponent muscle be advanced? These are the queries with various ocular phenomena, caused by the extrinsic muscles, that have often perplexed him.

The rhythmic exercises—the looking alternately with prism at a candle-flame fifteen to twenty feet distance, then, without the prism, at the finger twelve to fifteen inches from the eyes—the functions of the oblique muscles, and other ocular phenomona caused by the eye muscles were elucidated by the study of Dr. Savage's methods and exercises.

Experience and study have taught the writer when and on which muscle to operate, the relationship of convex and concave lenses to the extrinsic muscles.

Correct diagnosis is essential for scientific therapeutics. The more carefully we analyze the muscular error, and the more thoroughly we go into all the features of our cases, the less likely are we to commit operative blunders, and the smaller will be our proportion of failures. It requires different procedures to remove muscular errors depending upon its cause.

The common purpose of all the extrinsic ocular muscles is the production of binocular single vision, in obedience to the law of corresponding retinal points.

In one hundred consecutive cases in private practice, there was found forty-two per cent. orthophoria. This does not mean that fifty-eight per cent. heterophoria each require a surgical operation. All muscular anomalies no more require surgical operations than do six children out of seven require glasses, for fourteen per cent. of the children are emmetropic.

In the writer's practice, where cases are perplexing, to ascertain if the deviation is variable or constant, it is his effort to keep the patient under observation for one month previous to advising a surgical operation.

Small deviations may produce severe pain. There may be a latent deviation, as we observe there is a latent hyperopia. In these cases, a mydriatic is essential to observe the degree of exophoria or esophoria without accommodation.

The natural vertical meridians of the corneæ must be kept parallel, or double vision would result. As the ciliary muscle and all the extrinsic ocular muscles, except the superior oblique and the external rectus, are supplied by the third nerve, the third nerve is the nerve of accommodation; the accommodation, therefore, must embrace the ciliary muscle, and all the external ocular muscles supplied by the third nerve. The internal and inferior recti are attached nearer to the cornea than the external and superior recti. The oculomotor centre, beneath the aqueduct of Sylvius, is an interesting study. Whenever one of the muscles supplied by the third nerve is called into activity, there must be a corresponding activity of the other muscles supplied by this nerve, therefore, accommodation, sphincter of the iris, and convergence have a normal relationship, disturbances of which will produce simple asthenopia with the most complex symptoms.

If such a physiological action did not exist at the time of accommodation the vertical meridians of the retinæ would be turned outward below, and inward above from the vertical plane. Instead of the upper part of the eyes being turned outward by the inferior obliques, to retain their vertical plane in accommodation, the superior recti and inferior obliques counterbalance each other. The superior obliques, which turn the eyes downward and outward, relax with the external recti, which allows the inferior recti and internal recti to turn the eyes downward and inward, and which keeps the eyes in their vertical plane. When we read a book or paper, it is held below the horizontal plane of our eyes. The nearer we hold the paper to us, the farther it is below the horizontal plane.

Nothing is more perfectly adjusted than a pair of emmetropic eyes, free from paralysis, from paresis of their muscles, or from lesions. There is no machine or organ that could lose its balance so easily. The controlling impulse is first to see as distinctly as possible, and then to have an image of one object on each macula.

Errors of refraction can bring about disturbance in the correct balance of the external ocular muscles.

In the writer's opinion an over counterbalance of the muscles of the eye can easily occur which would cause exophoria with hypermetropia and esophoria with myopia. To illustrate: the first impulse with hypermetropic eyes causes the ciliary muscles to contract, which brings about an involuntary contraction of the internal recti muscle. Homonymous diplopia is prevented by a voluntary contraction of the external recti muscles. It is believed it is the over-voluntary contraction of the external recti muscle in some cases that causes exophoria, or the line of central vision to move too far outward. Correct the hypermetropia and you remove the necessity of accommodation, over and above what is required by the emmetropic eye. The internal recti muscle not being forced to contract, the voluntary contraction of the external recti muscles would not be called for, and the exophoria with hypermetropia is corrected by the convex lenses.

If one eye has more hypermetropia than its fellow, and both are

corrected by accommodation, the torsion, downward and inward, will be greater of the eye with the larger amount of hypermetropia. Consequently the vertical meridians of the retinæ will be thrown in a different plane, which will give the oblique insufficiency. The same process of reasoning can be applied to myopic eyes where the accommodation is entirely or nearly suspended, and the stimulus is less for convergence, and the eye is turned outward and downward by the external rectus and the superior oblique.

When the inferior recti muscles are called upon to direct the visual axes below the horizontal plane of the two eyes, they, at the same time, tend both to converge these axes and to rotate the eyes so that the naturally vertical meridians would diverge above. To counteract this latter tendency, the superior obliques are thrown into a state of activity, and the parallelism of the vertical meridian is maintained.

The same is true of the superior recti and inferior oblique muscles. With every contraction of the inferior recti muscles there must be a corrective action of the inferior oblique muscles. Thus, it is seen the recti and oblique muscles, while opposing one another in action to a certain extent, work together in effecting binocular single vision, by keeping the retinæ so related that the images fall on corresponding retinal points.

It is believed the eyes deviate vertically as well as horizontally where there is a difference in the refraction of the two eyes; that insufficiencies of the oblique muscles are due to a difference in the refraction of the two eyes, and they cannot be found to exist when the refraction is the same.

It is of the utmost importance to properly place the axes of cylindrical lenses to relieve torsion of the eyeballs.

Placing the 6° double prism before the right eye; if the left eye (the one under test) shows the middle to dip to the right, there is insufficiency of the left superior oblique muscle; if the line dip to the left, there is insufficiency of the left inferior oblique muscle. Dr. Savage found the insufficiency of the oblique muscle can be confirmed by rotating a cylindrical lens plus two dioptres to an axis that would increase the dipping of the middle line; and *vice versa*, to place the axis of the cylindrical lens so as to cause the middle line to be parallel with the two lines seen by the double prism.

The gymnastic exercises with these cylindrical lenses, placed in frames of German silver, with circular rims, to allow rotation of the lenses, as advised by Dr. Savage, have developed the weak muscle and benefited patients of the writer.

The patient fixes his vision on a light, twenty feet distant, with cylindrical lens, plus two dioptres, before each eye. The axes of the lenses are rotated from the minimum to the maximum effect, by intensifying the dipping of the line as previously ascertained by the double prism in establishing or controverting the diagnosis.

Where the phorometer shows esophoria in the far and near tests, and an adduction of 40° or more, it is advised to give a full correction

of the hypermetropia, thus curing the pseudoesophoria. That which remains may be cured by prismatic exercises or a tenotomy. Should the adduction be below 40°, prismatic exercises should be given. Where the adduction is very low, there is associated low abduction. It is not wise to operate on these cases; develop both the internal and external recti muscles by carefully prescribed exercises.

At the Section in Ophthalmology of the American Medical Association at Baltimore, Md., May, 1895, the writer heard a paper read, where an exercise from side to side proved efficacious in strengthening the external and internal recti muscles, and prismatic exercise to strengthen the external recti muscles was prescribed. If surgical procedure is necessary, it is advised to advance the external recti muscles.

Where the phorometer shows exophoria in both the far and near tests, with an abduction of more than 8°, partial tenotomy of the external recti should be performed. Where the abduction is less than 8°, prescribe exercise to develop the internal recti muscles, and strengthen both the internal and external recti by side to side exercise. If a surgical operation proves essential, advancing the internal recti muscles would be the line of treatment. Where the abduction is 8°, never operate on the external recti muscle. Use prismatic exercises to develop the internal recti muscles, and let the dernier ressort be the advancement of this muscle.

Where the phorometer shows the hyperphoric condition to exist, its exact quantity must be carefully acquired. Where the sursumduction of the hyperphoric eye is only 3°, the normal, the treatment should be by exercise alone. If an operation be necessary it should be the advancement of the inferior rectus of the hyperphoric eye. Should there be a greater degree than 3°, a partial tenotomy of the superior rectus of the hyperphoric eye is advised.

Rhythmic exercises, as advised by Dr. Savage, is the alternate contraction and relaxation of the muscle to be developed. The patient looks at a candle, at a distance of fifteen to twenty feet, with prisms, placed in a steel frame, in accordance with the muscle to be strengthened; after five or ten seconds, the prisms are lifted up to allow the light to enter the eyes uninfluenced. At the end of five or ten seconds, the prisms are again dropped before the eye. This exercise is continued from five to ten minutes, and repeated daily in accordance with the general condition of the patient. Never cause fatigue nor increase the nervous element in the case.

In conclusion, let the writer say, too much praise cannot be given Wilson's phorometer. The writer has all the various appliances in his office to test muscles of the eye, and he finds Wilson's phorometer more expeditious and reliable in the information it communicates than any other instrument.

Discussion.

R. S. Copeland, M.D., Ann Arbor, Mich.: I like the conservatism of the essayist. At every point in his paper is it apparent.

Especially do I feel like commending him for the advice to keep the patient under observation for at least a month before advising an operation. Were it expedient, I believe, it would be wise to take the same course before resorting to any sort of local or optical measures. In my experience I have seen a good many cases where the first examination revealed some form of heterophoria, and in which treatment directed to the general condition of the patient caused the apparent insufficiency to disappear within a few days or weeks.

The theory and the condition, however, too frequently fail to coincide. A patient, perhaps a student, a book-keeper, or a dressmaker, somebody who cannot afford to lose time, comes to the oculist demanding immediate relief from the asthenopic symptoms. In such a case, if I find a considerable amount, for instance, of exophoria, I combine with the correcting lenses, prisms of sufficient strength to correct about half the heterophoria. This plan results usually in great relief to the patient, and the prospect of laying aside the glasses stimulates him to come to the office for systematic prism exercise.

In cases demanding an operation I agree with the essayist that an advancement is preferable to a partial tenotomy. My experience with this form of treatment has been fairly satisfactory.

Modern Treatment of External Eye Diseases.

By C. Gurnee Fellows, M.D., Chicago, Ill.

In discussing the modern treatment of external eye diseases I wish especially to bring forward those things which recent developments have proven to be efficacious. There will not be time to discuss those methods, which, though classical, are now discarded as harmful. One would hardly recognize the treatment of many diseases as in any way related to the same subject discussed in text-books a few years old, and in no line of work is this change more rapid than in the department of ophthalmology.

Ophthalmologists of all schools are learning from experience that many of the ideas formerly advanced are erroneous, and that harsher treatments, stronger medicines, counter-irritants, etc., delay rather than promote a cure. The indiscriminate use of strong solutions of nitrate of silver, the old blue-stone, alum, etc., are being relegated to the rear; on the other hand, many new preparations which are extolled upon their first appearance do not prove, after longer acquaintance with them, to be of permanent value. I wish, however, to bring up for discussion some of the newer medicaments, as well as the older, and those which have proven themselves to be of value, and are being placed in our every-day armamentarium. As an example, the classical use of nitrate of silver in a ten-grain solution, after the manner of Credè has still many warm adherents, but it seems from the usage of recent years, that the strength of the solution has been reduced, and simple antiseptics, which are certainly harmless, answer every purpose of prophylaxis in the ophthalmia of new-born children. It is probable that the flushing of the conjunctiva prevents the continuation of the disease by washing away the germ rather than the actual killing of them by toxic agents, and surely in our school there is no reason why we should not use the milder means locally, together with the internal, for the best results.

One of the new and valuable drugs used in ophthalmology is Holocain, which is quickly absorbed, produces anæsthesia in a few seconds, without drying the cornea, dilating the pupil, or paralyzing the power of accommodation, advantages not possessed by Cocaine. It may be used in weak solutions, one per cent., or even half of one per cent. answering every purpose. It is especially valuable in removing foreign bodies and other light operations of short duration, although applicable to other operations, including cataract.

The extract of suprarenal capsule is valuable for the following reasons: Its physiological effect is to contract the arterioles. Its main use is to increase the action of Cocaine, by locking up the latter drug in the tissues, and thereby preventing hemorrhage. So far its use has not been followed by any constitutional disturbances. The lack of hemorrhage, the ischæmia which it produces, and its prompt action make it exceedingly valuable in operations upon the external parts of the eye.

Subconjunctival injections of bichloride solutions, much vaunted at first, have proven to be of permanent value at certain stages of the treatment of ocular diseases. It is possible, however, that injections of the solution of chloride of sodium, or boracic acid may be equally useful.

Formaline, a forty per cent. solution of formaldehyde, is an antiseptic of great worth, as it prevents putrefaction and is a tissue preserver, though not toxic. It diffuses itself rapidly through the tissues, does not coagulate albumen, as does the bichloride, and is therefore a very useful antiseptic in both acute and chronic inflammation of the conjunctiva, in corneal ulcers, both simple and infecting, in solutions, one to 1,000 or weaker. It is also a good antiseptic for the preparation of instruments, as it does not dull their edges.

In inflammatory troubles, where the tendency is toward suppuration, the application that can take the place of the old-fashioned poultice has been greatly sought after, and it seems to have been found in Antiphlogistine. It has the power of aborting the process of suppuration if applied sufficiently early. It quickly and easily centres the suppurative process, if inevitable, preparatory to a surgical opening. It relieves the pain and tension by absorbing moisture, and it loses its power only after having itself become dry. I have had good success with it in treatment of threatened abscess of the lids.

Blood serum, or some of its equivalents, in the form of prepared foods, has been extensively used in general surgery, particularly in ulcers. The feeding of the cornea, which is very scantily supplied with nutriment, especially in inflammatory conditions, is essential to the restoration of the healthy condition, and when the blood-vessels are already loaded to their capacity, and the lymphatics are surcharged with débris, the cornea can derive but little nutriment from the natural channels. It is in such cases when ulceration is found far advanced that the direct application of Bovinine, dropped in its undiluted state directly upon the cornea, exerts a powerful influence toward arresting the disease and bringing the cornea back to its healthy state. I could cite some interesting cases, the happy termination of which I believe due to the use of blood serum.

Fluorescine in a one per cent. solution is not of so much value from its therapeutic as from its diagnostic stand-point. When applied to the healthy cornea it leaves no trace behind; but the slightest roughness or breaking of the epithelium by a foreign body, injuries, or inflammatory disturbances, will be immediately detected by the

staining of these points a greenish-yellow in color, and then by outlining them accurately for the eye of the attending surgeon.

Massage, both general and local, is a subject which has received a great deal of attention within the last few years, but particularly as applied to the general system. It is, however, as applicable to the eye as to any other individual organ. It is quite possible that the massage itself by increasing the blood supply increases the action of the lymphatics, the main virtue of its therapeutic effect. It may be combined with medicated substances, which will assist in obtaining the desired results. Massage is particularly indicated in diseases of the conjunctiva. In the sub-acute and chronic forms of conjunctivitis, especially of the papillary form and intrachoma, the application of massage together with a powder of boracic acid, calomel, or ointments of yellow oxide of mercury, tannic acid, or whatever medicament is indicated, will be followed by satisfactory results. Some years ago I saw many cases of simple trachoma in the acute form treated by massage, applied directly to the inverted lids, upon which a copious application of pure boracic acid had been made, and the results appeared to be eminently satisfactory. Massage, when thus applied, should be made directly to the diseased tissue and not indirectly through the lid. Use is also made of direct massage in the treatment of corneal opacities, but, in this instance, by means of a hard rubber spoon, and with the addition of some stimulating ointment. Corneal nourishment has thus been secured, absorption improved, vascularity increased, and the lymphatic channels stimulated. While speaking of trachoma I will simply mention the treatment recently adopted for the proliferating or hypertrophic form by the use of roller forceps or some modification of them for the purpose of expression.

Heat and cold are two agents, which, though always at hand, and so simple that they should be thoroughly understood, have not received the attention at the hands of all physicians that they deserve. The temperature of the eye varies in health and disease as does that of other organs of the body. Up to the present time we have not been able to detect the variations of temperature to an accurate degree, but Galezowski has recently invented a practical thermometer, by which he hopes to be better enabled to detect the variations of temperature. Heat and cold can raise and lower the temperature if applied under proper conditions. Cold lowers the temperature by contracting the blood-vessels, and heat raises the temperature by dilating them. Cold limits the exudation in inflammatory conditions, while heat aids by absorbing exudation and promoting nourishment by stimulation. Continuous application of either agent is necessary until the effect is produced, at least fifteen minutes being the average time for therapeutic purposes. Cold dry applications are advised, made by the use of the ice-bag or ice water run through Leiter's coil; while cold moist applications are made by gauze taken directly from blocks of ice. Dry heat can be obtained by means of a hot-water bag, or hot water through a Leiter's coil, and hot moist application by compresses wrung out of hot

water, or by means of steam and vapors through an atomizer, modified to suit the purpose. Traumatic conditions and iritis frequently demand ice in the early progressive stages, but in the later stages, with involvement of the cornea, heat is the more efficacious. Heat promotes the absorption of drugs, as instanced in iritis, when adhesions have taken place, and if atropine fails to act it may be greatly augmented by the application of heat. In the early stages of pannus, cold is allowable, but when vascularity appears heat is to be preferred. For the relief of pain particularly neuralgic in character, heat is, as a rule, to be preferred to cold.

There is a therapeutic use of bandages. At times the cornea, when about to rupture, needs support. Following operations, or trauma, bandages are used to hold the eye immovable, and are therefore used for compression. Their applicability as therapeutic agents can hardly be questioned, but their absence is just as necessary in corneal or conjunctival troubles in order to allow better drainage, contact of air to the diseased parts, to allow of motion, etc., and in these conditions, when light must be diminished, the use of colored glasses is allowable. But I believe that the prescription of colored glasses by the laity is often injurious, for the eye in a healthy state is tolerant of light.

Electricity in almost all its forms may be useful in various diseases of the eye, but, so far as external diseases are concerned, the Galvanic and Faradic currents are not so commonly useful. The galvano-cautery is, however, a sheet anchor in serpiginous, or infecting ulcer, helping to cut short its progress.

Electrolysis has been used in combating trachoma, platinum knives having been commonly used; of late, however, copper electrolysis has been warmly advocated. In this connection I can but refer to the great advantages to be derived for the purpose of diagnosis from the recent introduction of the Roentgen ray.

I would not have you believe, that, after mentioning all of the foregoing methods of treatment, local in character, these are the only means at our disposal. We do not advise the use of all of these methods all of the time, nor some of them all of the time, but some of them, some of the time. It should not be possible to treat diseases of the eye without a thorough understanding and knowledge of the body as a whole, and it is advisable that all oculists should first be not only educated as physicians, but that they should have practised general medicine for some years. The eye is part of the human body, and should neither be separated from it in health or disease, when it comes to the question of its treatment. Causes, near or remote, should be thoroughly understood; their co-relation and interdependence analyzed, and if a torpid liver, indigestion, renal insufficiency, or localized inflammation within the brain, be at fault and the cause of ocular disturbance, the oculist should know how to trace it and where to refer the patient. His knowledge of exclusion should be as great as that of inclusion. But when the eye is at fault, and needs attention, it becomes his business to prescribe for the various dyscrasias, to recommend

hygiene and sanitation, to have a knowledge of climate and its effect upon his patent, and then to select the remedy in accordance with the whole picture, covering the body from head to foot, and the best interests of his patients will be subserved.

F. J. NEWBERRY, M.D., Iowa City, Ia.: The ground has been so thoroughly covered by this paper that there is very little left for me to say but to endorse some of the methods of treatment laid down therein. Charge has been made that the modern oculist is prone to pick up a certain line of treatment, follow it out for a few months or a few weeks, as the case may be, and again take up the next new line of treatment that comes along. But be this as it may, there is no doubt that the present line of treatment generally followed by oculists, in the treatment of external eye diseases, is greatly superior to that of the past, when strong caustic preparations were commonly used. In regard to the treatment with the new anæsthetic Holocaine, I have had some experience. My results thus far have been uniformly good, but with all of these newer preparations I am disposed to withhold my unqualified approval somewhat in reserve. I used Cocaine many hundreds of times before before I personally saw any bad results from its use. This new anæsthetic has undoubtedly come to stay, and I hope it will be found efficient and without danger in all cases. The use of serum-therapy is undoubtedly as applicable to the eye as to other parts of the body. I have considerable faith in this line of treatment, and undoubtedly many eyes have been saved, affected with corneal ulcers, which would have been lost otherwise. In the use of massage, especially in trachoma, I have had excellent success. I have been using it in my practice for a number of years, and have nothing but good to say for it. I got practically as good results from the use of massage alone as from the addition of mercurial or other preparations used in conjunction. My method is to massage the conjunctiva, especially in the latter stages of the disease, when cicatricial contraction is taking place. I obtain a better result in this stage of the disease than in the earlier stages; while it is not my practice to use the massage without some antiseptic preparation, still there is reason for thinking that it is the massage alone in which the curative effect lies, from the fact that our osteopathic friends manage to get hold of a good many patients who have been the rounds of the oculists, whom they simply treat by massage, giving careful attention to the conjunctival membrane. I have seen quite a number who have been thus cured, with no evidence of the trouble recurring after a considerable elapse of time. Consequently, I think it is the massage that does the work rather than the mercury or the medicinal preparations used.

In regard to the use of heat and cold, I would rather be without any other local application than without this valuable adjunct to the treatment of eye diseases. I do not think any specialist is properly equipped for the treatment of diseases of this character, who does not bear in mind the value of heat and cold. There is much difference of

opinion as to when heat should be used and when cold should be used. In my experience it depends very much upon the individual. I have different cases apparently in the same condition, and find in one that heat benefits the case, while in others the cold benefits, and I have often found in cases where heat aggravates, that cold is beneficial, so I have not been able to find any hard and fast rule by which heat and cold may be applied, although, I think, in a general way, that in diseases of the cornea and troubles involving the ball of the eye, requiring energetic treatment, heat will be found the most efficacious. Doctor Fellows also mentions the harmful use of smoked glasses. I think that many cases of eye trouble are aggravated by the indiscriminate uses of these glasses. I think the reason is on account of their grinding. If you can get a perfectly plain glass I do not think you get such bad results as when there is a refracting power in the glass. I was also pleased to note that the doctor has not forgotten the homœopathic remedies. There is a tendency among some of us, in the specialistic field, in our efforts to keep up with the times, to rather slight the indicated remedy, but most of us are thoroughly impressed with the efficacy of its use, along with the modern methods of local treatment. I have, personally, great faith in Homœopathy, and, I think, my record book will show that a very fair proportion of cases of external eye disease, such as phlyctenular conjunctivitis and other external diseases, receive no other treatment than the indicated homœopathic remedy.

F. J. Boutin, M.D., Independence, Mo.: I would like to ask the doctor one question. He spoke about smoked glasses injuring the eye. It has occurred to me a great many times when I see ladies wearing veils with spots in them, and keeping it up day after day, if that would not induce eye-strain of considerable importance. It seems to me as though wearing of veils with spots, persisted in, and also reading through them, as I have seen them, would produce a certain strain that would be a permanent injury.

In regard to the use of heat and cold (I am not an eye doctor) in cases of acute troubles, I have seen very marked benefit by heat and cold and the indicated internal remedy.

E. Elmer Keeler, M.D., Syracuse, N. Y.: Regarding the subject of the use of homœopathic remedies, the charge is made that we often neglect them, and I fear we will have to plead guilty to the charge, for we, as specialists, are prone to rely too much on local applications and mechanical remedies in the treatment of eye diseases. The fact remains, however, that the use of the properly indicated remedy belongs to the homœopathic oculist, and is his chief weapon. Making it a personal matter, I can say that a great share of my practice has come in the way of different patients, who have been under treatment by old-school specialists, and, coming into my hands, they have received practically the same local and mechanical treatment as they had previously, plus the indicated remedies, and they have been cured.

D. A. STRICKLER, M.D., Denver, Col.: The subject of heat and cold has interested me quite a good deal. I was interested in what my friend Newberry had to say about the indications for them. I presume it is the experience of all that there are no hard and fast lines, but, as a general rule, cold is applied with advantage in traumatic cases, and heat in idiopathic cases, or in cases where the general health is run down. The question of how heat can be best applied is an interesting one, and one I should like to hear something about, if from the different oculists, those who have some special method of application. I have recently tried the Geyser Hot Water Heater with very satisfactory results, because it runs continuously and is applied, without removing from the eye at all, by wetting absorbent cotton and laying it over the eye, and placing the disk or eye-piece over the top of it. I do not believe there can be any question at all but that we get marked results from the use of homœopathic remedies, and I have had a very forcible illustrations of that, the past week, in the case of a man with a bad corneal ulcer. I treated it for a few days. A careful examination indicated iodide of mercury, and the change in twenty-four hours was one I could hardly believe to be possible.

DR. FELLOWS: I will consume but a moment's time. The subject is interesting to me and I would have liked to make that paper an hour long. As to the application of homœopathic remedies I would have liked to take another fifteen minutes. The question was brought up as to Holocaine being comparatively new, yet it seems to me the advantage of using it over Cocaine, lies in the possibility of taking foreign bodies out of business men's eyes without any undue loss of time or inconvenience. It does not dilate the pupil, and it is of inestimable advantage for use in the office. The application of heat, as referred to by Dr. Strickler, I would like to take up again. I have improvised a spray by taking the hose out of the bathtub to get the force of the water as well as heat or cold, as the case may be, forcing the stream against the eye.

Glaucoma.

By S. C. Delap, M.D., Kansas City, Mo.

It is not the intention of the writer to enter upon a text-book discussion of that combination of symptoms to which the term glaucoma has been applied, neither has he any desire to dwell upon the various theories of cause, nor to enter upon an enumeration of symptoms or modes of treatment. The object of this brief paper will be attained if two thoughts are impressed upon the profession, that primary glaucoma is generally the result of eye-strain, and may be prevented by the properly fitted glass, and that homœopathic remedies constitute a far more efficient mode of treatment than can be truthfully ascribed to iridectomy.

For a decade I have taught that errors of refraction are a prolific source of eye diseases, and that they are largely responsible for cases of primary glaucoma. It was therefore with much satisfaction that I ran across a statement by Professor Schoen, of Leipsic, who asserted. some months ago, that eye-strain is always the cause of primary glaucoma. This assertion was such a wide departure from the statements of most of our text-books that I have been emboldened to write this paper. Cases have come under my care where increase of tension was so indisputable that I have worried over them often for weeks, the teaching of the books demanding that the eye be mutilated by an iridectomy; my observation of the effects of eye-strain impelling me to wait a day or two longer, to apply cautiously a mydriatic in its most attenuated form, to give the indicated homœopathic remedy meanwhile and await, as best I could, the results, be they relief or be they the dire necessity of an iridectomy.

To the medical man who is conversant with the teachings of past decades, respecting the treatment of glaucoma, and understands the effects of Atropine as ordinarily used in cases of fully developed glaucoma, it need not be suggested that edged tools are being handled when a mydriatic is applied in such cases, though it is very doubtful whether it is half as dangerous as has generally been supposed, or whether it is capable of more harm than the triangular knife. The increased tension seems to be associated with a certain degree of spasm of the ciliary muscle which suggested the great desirability of securing the relaxation by means of mydriatics. Reprobating everything that savors of recklessness in the dealings of a physician with his patient, it was with trepidation that I began the use of Atropine, first in solutions of one grain to ten ounces of water, and then stronger

solutions as the effect became more and more apparent in the relief of the patient. Sometimes I began with the use of Homatropine, also in greatly attenuated doses, especially in those cases where it was highly desirable that the effects of the drug should be of the most transient character. In the last year or two Scopoline has been chosen as less likely to produce increase of tension, one-eightieth of one per cent. being the strength usually selected. In this way I have cautiously proceeded until I have found it to be perfectly safe to use even Atropine in solutions of four grains to the ounce.

Other cases have yielded most promptly to the homœopathically selected remedy. In one instance, which comes to mind, Arsenic acted so promptly and efficiently that both patient and oculist were amazed at the effect. In another instance Bryonia was equally magical. A case in the college clinic has acquired wide notoriety from the astounding effect of Rhus tox. The patient contracted glaucoma during the winter of 1864-65, while a soldier in Grant's army, before Petersburg. Since that time he had suffered pain all the time, not a day, nor an hour, had he really been free from pain. Army treatment had no effect, except that morphine relieved temporarily. Throughout this long period of more than twenty years, rheumatism was associated with the glaucoma, possibly the cause of it, and he could find no one who was able to relieve him. About a year ago he came to the college clinic. The glaucomatous eye was blind, of course, greatly inflamed, and very painful. Among other things the ophthalmoscope showed considerable hypermetropia. Rhus tox. 3x was given. After the first dose he was better. After a week the pain ceased. Up to the date of this writing he has had no return of the rheumatism, nor of the glaucoma. Iridectomy became wholly unnecessary. It would probably have been useless for the relief of pain, and it would doubtless have been necessary to follow the operation by the removal of the eyeball before the patient would have found any surgical relief.

In a large practice it is a remarkable fact that, in a period of thirteen years, I have not found it necessary to perform iridectomy, except in a single instance, for the relief of primary glaucoma. In this solitary case I am only sorry that I did not trust a few days longer to mydriatics and the homœopathic remedy, feeling assured that the result would have been better. But I was impelled by the teachings of the profession and the pressure of over-anxious friends, as is doubtless true of many another oculist, and hastily adopted the dernier ressort. I now feel satisfied that it was a mistake in the single instance, and I am convinced that the teachings of the profession should be greatly modified respecting the cause and treatment of primary glaucoma.

Discussion.

J. B. Garrison, M.D., New York: I can very well realize that when Dr. Delap made the change of subjects, the change of discussors should have been made as well. I believe this paper should and will

have a good effect upon us all in causing us to think of the remedies in all cases. It seems to me that knowing the remedies, and from the reports of cases which Dr. Delap has given us, it should make us more strong in the search for the indicated remedy, and it should be made not once, but many times. What the treatment of these diseases is I know nothing about as a specialist; the eye does not enter at all into my practice. In all cases where I am called upon to prescribe in any way, I endeavor to remember that the Materia Medica is the first thing to be consulted. I have seen many cases in my own practice and in that of other men, where diseases of different organs of the body had been treated by other remedies, but without any effect at all until homœopathy had been put to the proper test.

C. GURNEE FELLOWS, M.D., Chicago, Ill.: I do not want to talk all the time, but I do want to say something in regard to the method of treatment as outlined in the doctor's paper. Those of us who have had many cases of glaucoma know that Atropine is the only thing we are afraid of, and its use is something worth discussing and thinking about before we accept it. A great many papers read to-day have the fault of not containing anything to discuss, but if we had a lot of oculists here, discussion would not be lacking on the treatment of glaucoma as outlined in this paper. Experience is the best teacher in the world, and I would not be convinced by the experience of two years in the use of Atropine in glaucoma. Commencing as he did with a small dose of Atropine he has taken a wise course, and has had happy results. Atropine may, perhaps, often be used to prevent further surgical treatment, but I am very prone to think that the happy results were obtained through the use of homœopathic remedies rather than through the Atropine itself.

GEORGE W. MCDOWELL, M.D., New York: I am afraid Dr. Delap's paper it very apt to do harm, not only to the profession at large, but to a great many innocent people. The proof of the pudding is in the eating. He has had good success, we cannot gainsay that, but it must be laid down as a rule that the general practitioner does not recognize glaucoma in time to save the eye from blindness. Sometimes there are no general symptoms to call attention to the eye condition until the case has advanced so far as to cause blindness, and this may occur in a short or a long time. A great many cases of glaucoma have been treated homœopathically, and a great many such cases have gone on to blindness. I think a majority of cases of glaucoma that come to the oculist have been under treatment by the family physician. In most cases nervous trouble is at the root. Nervous shocks are often productive of glaucoma. The use of Atropine without anything to reduce tension is bound to produce atrophy of the nerve if persisted in, so, with all deference to Dr. Delap, we have the probability that every case of glaucoma so treated will result in blindness. Before the introduction of iridectomy most of the cases of glaucoma went on to blindness,

but since that time many cases have been saved to vision. The use of Eserine is known to reduce tension. The use of Atropine has been known in many cases of normal eyes to increase the tension, so, I think, we must consider this matter very carefully indeed, before we rely entirely on homœopathic remedies and throw over Eserine and iridectomy for anything else.

F. J. NEWBERRY, M.D., Iowa City, Ia.: I would like to mention just one instance where Atropine aggravated a case of glaucoma, and myotics and homœopathic remedies cured the case. Several years ago a farmer came to me and said he was having trouble with his eyes. On examination I found glaucoma present in both eyes, one presenting a more advanced stage than the other. I put him on Eserine and gave him Gelsemium internally. He did not recover as fast as he wished; a travelling oculist came along and he allowed this so-called oculist to instil Atropine in his eye, and he immediately became totally blind. This frightened him and he rushed to my office at once. The tension was very much increased by the Atropine. He had to be led into the office, while his vision before was such that he could see to drive his team, but the Atropine rendered him perfectly helpless. I immediately commenced to use Eserine and continued the Gelsemium. (I think Gelsemium was the only homœopathic remedy I gave him, and Eserine was the only instillation I prescribed.) The tension gradually became reduced, and within a year he was about his work with no evidence of the glaucomatous condition or increase of tension. This was three or four years ago. I saw the man three or four days since; the tension was perfectly normal, and he had no further trouble with his vision.

D. A. STRICKLER, M.D., Denver, Col.: There is one feature of the doctor's paper that has not been discussed, and that is the cause. The doctor thinks that in nearly all cases it is due to eye-strain, and that is the opinion I have been forming for some time. Originally I did not believe it was true, but I am now becoming convinced that there is a great deal of truth in it, and the principle of the treatment, in many of these cases, is to correct the refraction, which has been my practice. I certainly should hesitate to use Atropine, and yet the doctor has approached it in as safe a manner as one can approach it. I have seen cases somewhat similar to those reported by Dr. Newberry, in which the glaucoma was very much relieved by the use of a mydriatic. Some years ago, Swan Burnett referred to the use of the Japanese hot-box for the relief of pain, and I had occasion to use it in the treatment of glaucoma with entire success.

DR. DELAP: One of the subsequent speakers whispered in my ear, as I sat down, that now is an opportunity to jump on the essayist. I expected to be "jumped on" worse than I have been for advocating the use of Atropine in glaucoma. I said one grain of Atropine to ten ounces of water, instead of one grain to one ounce. One drop of a

solution of one grain to ten ounces of water will simply dilate the pupil for a few hours, not to exceed ten or twelve, and will not be long enough, or decided enough, to produce any serious effect, even if such were feared. I want to say, too, that Professor Schoen, as reported by the *American Journal of Surgery and Gynecology*, makes a report of one hundred and forty cases of glaucoma, and he found that forty-eight per cent had hypermetropia, thirty-three per cent had astigmatism, and nineteen had other errors of refraction, and he concluded that eye-strain was the cause of the glaucoma. I do not go that far in my paper. Now, then, if eye-strain, as I reasoned many years ago, is the cause of the trouble in, at least, many cases, and as we know that there is nothing that relieves so quickly as a mydriatic, then why not use one in the early stages of glaucomatous conditions where eye-strain is clearly the cause? I can see that a mydriatic, administered in too strong doses may possibly increase the congestion of the ciliary body, that the iris may be crowded into the iritic angle and the channels of excretion blocked, thus checking the outflow of fluid, and, therefore, the cause of aggravation. But Atropine used in the proportion of one grain to ten ounces of water will relieve the excessive congestion of the ciliary body, and will do no harm. It has repeatedly done this for me, and that is the reason I recommend its use. I believe it is a great remedy in the relief of eye-strain and the consequent treatment of glaucoma. I know it is contrary to all teaching respecting the use of Atropine, and I expected its advocacy to meet with objection from oculists and practitioners who had been especially taught to eschew Atropine in glaucomatous conditions.

Dr. D. A. MacLachlan (Chairman): The subject is of great interest to us all, and the question of the treatment of glaucoma is of great importance. We know the dilation of the sphincter is through the sympathetic, but there are so many causes that give rise to glaucoma that I should be unwilling to believe the condition to be entirely due to eye-strain. There are some points which lead me to believe that we may yet find something that will be very useful. I think the remarks of Dr. McDowell can be heartily endorsed, that there should be time for experimental use. It may be all right in the hands of the specialist, who thoroughly understands the condition, and can tell from hour to hour what effect the drug is having, but I am sure that Dr. Delap, with the rest of us, is persuaded that the general practitioner should not undertake to use Atropine in those conditions. It might result, in some cases, fatally to sight, and while I believe in Dr. Delap's hands it might be used to experiment with, and he might succeed without harm, and, perhaps, the same might be true of some others with a good deal of instruction, yet, to commend Atropine to the ordinary medical man, would be like putting a pistol into the hands of a child; it might do a great deal of damage, and I would not advise the general practitioner to use Atropine, locally, even in small doses.

The Optician Versus the Oculist, Ethically and Commercially Considered.

By Hayes C. French, M.D., San Francisco, Cal.

The present gravity of the situation, certainly as it exists on the Pacific Coast, warrants the serious question, whether that portion of the oculist's calling that pertains to the correction of refractive errors is not likely, at the present rate of loss, soon to disappear under the thrift and enterprise of the ubiquitous optician?

In this age of fierce competition the learned professions are universally organized, or organizing, to secure their legal, ethical, and commercial rights as against incompetent and illegal competitors. The writer believes the time is ripe for such action on the part of the homœopathic oculists of America, and with a view to organization for such purpose, would respectfully call the attention of his colleagues first, to the

Ethical Phase of the Question.

The first query that arises in the thoughtful mind is whether optometry constitutes any legally recognized part of the practice of medicine or surgery, either or both, and whether the optician, in assuming the responsibility of such practice, does not, also, assume a part of a function that can only be safely and legally performed by one specially commissioned for such work by the State?

The legal practice of medicine and surgery includes the examination, diagnosis, and treatment of all diseases, deformities, and injuries incident to any organ or part of the human body.

The oculist, in safely and successfully prescribing glasses, has frequently to take into account a complex train of closely related sympathetic nervous troubles, all of which the optician assumes to know and understand when he prescribes glasses for any defect, with, perhaps, the sole exception of the condition of simple presbyopia, and even in determining this trouble satisfactorily he must often enter the field of the physician. Hypermetropia, myopia, and astigmatism are due to physical defects in the organic structure of the eye, yet, at the same time, their correction often involves an intimate knowledge of the function of accommodation, and this part of a physician's office the optician assumes when he prescribes glasses for these cases; and failing to acquaint himself with these related truths, he, besides trenching upon the domain of medicine, is guilty of malpractice to the extent of

his ignorance. Empirically the optician learns that certain refractive anomalies are frequently associated with headaches, and glibly promises immunity from the head trouble if the customer (patient) will take his glasses (prescription). What in this case is the difference in legal responsibility, between this merchant-physician and the legalized physician whose office he usurped? The spectacle-doctor diagnosed headache and prescribed glasses, with what ethical right if he has not a doctor's diploma and license? It is all smooth sailing for the doctor, minus the diploma, if his prescription happens to relieve the migraine, and opens the way for the prescription of a simple collyrium, which the optician's "cousins, or his sisters, or his aunts" had found good for "sore eyes"; but what about the over or under correction in cases of accommodative spasm and kindred abnormalities which frequently produce headaches, and, perhaps, lay the foundation for serious, if not incurable, neuroses, or even insanity? Scientific and up-to-date optometry is so intimately linked with a knowledge of heterophoria and its treatment, and a long train of complex nervous reflexes in relation to other organs of the body, as to require of the finished diagnostician a profound knowledge of human anatomy and physiology as a whole, and even with all these accomplishments in superlative degree the true oculist is not boasting of infallibility, yet he must compete with practitioners who make no pretensions to even the most rudimentary knowledge of these subjects. In case of acute glaucoma, optic neuritis or amotio retinæ the meddlesome refractionist might, by deferring decisive and necessary action, entail serious if not fatal consequences to the too-confiding patient. Surgeons require instruments, but instrument-makers do not assume to be surgeons. So, also, in relation to the druggist and the physician; why, then, these exceptional honors to the makers of glasses? The optician has a useful, honorable, and legitimate place in the community as an artisan and merchant; but, before he assumes the resonsibilities of an oculist, he should be required by law to give proof of an oculist's qualifications. A knowledge of the entire domain of medicine and surgery is required as a foundation for the practice of our speciality as refractionists; why should an exception be made in the case of opticians? With no better title than bottomless assurance an optician, on the principal site of our city, has put out his sign as "Oculist and Optician," the only wonder is that he was content to spell "Oculist" with one "c."

The Financial Aspect of the Question.

In the days of his business incipiency the optician will be found in generous reciprocal mood. He will not, then, forget the oculist when a tough refractive case seeks relief, and a share of the "valuable patronage of the house" will be turned to the account of the specialist who has sent prescriptions. However, as the years go by the number of those who are sent to the optician to return no more to the expectant

oculist, increases just in proportion to the commercial wealth and influence of the fortunate house that has thus succeeded in blinding the specialist, if not his patients, while it has been urbanely transposing the law of "meum et tuum" as it relates to patronage. The professional refractionist is fortunate if his families return to him after they learn that opticians are claiming to do an oculist's work free, or, at largely reduced rates. The optician's first thought is for the sale of his wares, and his fees, as an "oculist," are on a declining scale from £5 to whatever the customer cares to pay, or zero; and when the oculist fee fades from view he is still cheered by the memory of the profits of the optician; and thus the honors and rewards of a painstaking specialist are cheapened and the legitimate fruits of an arduous profession become the easy spoils of a piratical craft. The oculist's commissions on glasses are supposed to be important in a large prescription practice, but the uncertainty even of these golden promises was illustrated in the case of an impecunious patient, who, having negotiated the lowest rate for a specialist's services, asked the privilege of obtaining the glasses through a mercantile supply agency. The firm to which he was sent by the agency, proved to be the one on whose blank the prescription was written, and the terms obtained were below their quoted wholesale prices to oculists and the retail trade. If he or his friends need the glasses in the future they will turn from the oculist to the optician, and, with a gratuitous or half-priced examination, have their prescriptions filled on better terms than can be obtained by the oculist or retail dealer, and these are the equities existing between a learned profession and their unlearned and arrogant masters.

The only remedy for the evil is for the oculists to fill their own prescriptions, dealing directly with wholesale manufacturers, or, to deal only with those retailers who do a legitimate prescription business and respect the rights of the educated specialist. In presenting these facts the writer does not under-value the qualifications, and the splendid refractive outfits of many leading opticians, nor does he blame these enterprising artisans for accepting so buoyantly what is being thrust upon their willing victims.

Discussion.

H. F. Fisher, M.D., Kansas City: The prescribing of glasses for hyperopia, myopia, astigmatism, presbyopia, and especially heterophoria, and their effects certainly belongs to the domain of medicine and surgery. It is so recognized by the medical profession and the more enlightened portion of the laity. But unfortunately the majority do not see the necessity for medical legislation, and look upon attempts to compel others to come to our standard, as persecution. But if the medical profession is to be regulated by law, then anyone attempting to practise medicine, in any of its branches, should be compelled to comply with the same laws, and if they do not they should be treated as breakers of the law.

As oculists we know that certain lenses if placed in certain positions, will relieve certain conditions, while, if placed in certain other positions, they will not only relieve, but, in reality, aggravate. We also know that remedies will relieve many symptoms for which the optician would recommend glasses, simply because he makes a profit from the sale. The optician makes the statement that he charges no fee for examination, yet he seldom lets a party depart without selling some kind of a glass. He cannot afford to carry a large stock, pay rent, possibly a license, and incidental expenses without being paid for his time. Hence, he will often insist that glasses are necessary, when such is not the case. Hence, harm is done, and considering the eye the most useful organ of the body, if the physician is made to fulfil certain requirements before being allowed to practice, the optician should be made to comply with the same laws, or not allowed to practise his profession. I am opposed to medical legislation, but, if one must be regulated, regulate all.

I know opticians who prescribe prisms for heterophoria. Claim they can cure headaches and nervousness with glasses and even go so far as to use mydriatics, poisonous medicines, to cause dilatation of the pupil, etc. This is certainly practising medicine. These men are licensed, and some of them patronized by our "City Dads." If these same men were to ruin an eye by their lack of knowledge could a damage suit be sustained against them? No. They would plead that they are only merchants, show their license, and say that the man could have gone to a physician if he had wanted to. Less than two weeks ago I heard an optician tell a confiding old woman, "I know the condition of that eye as well as any oculist, and know that it cannot be fitted with a glass." He told me, "She is getting her second sight." How did he know? He had not made any examination with the ophthalmoscope, had elicited no symptoms, and had not tested the eye more than two minutes, if that long. May not there be some condition there demanding medical or surgical treatment? Might not a glass have been fitted? I have fitted lenses to parties having their "second sight," and believe it can be done with advantage in some cases. He was willing to take the risk to sell her a pair of gold-filled frames, on which he would make the profit of a dollar. I had a case of iritis sent to me last winter, in which the synechiæ had become so firmly attached that dilatation of the pupil would not break them. After he was cured a relapse was caused by the tension on these synechiæ. This patient foolishly consulted an optician, who tried to fit a pair of glasses, and told the man "there is nothing the matter with your eye." Had the case been recognized at first, the subsequent attack would probably never have occurred, and the primary cure would have been much more rapid. Had these opticians qualified themselves in medicine they would be qualified to practise, but neither of them has ever studied medicine, and very little of optics, yet they assume the responsibility of physicians.

The sphere of the optician is to grind lenses and sell optical instruments. It is also to fill the prescriptions accurately. But I feel

that he should not even be allowed to fit the frames according to his own judgment. If there is esophoria, the frame should be set differently from what it would be set in exophoria. Hence it is the duty of the oculist to make the measurements for the frames, and then see that they are made according to prescription. Here is where the optician has made his greatest inroads into the practice of the oculists. We have sent the patient with a prescription for the lenses, with no idea of what he should have to carry them in the proper position, have let the optician put on any kind of frame, and set it in any position he chose, and the patient did not get the relief. Instead of thinking the oculist was at fault, which he was for not furnishing the proper measurements, the patient returns to the optician and makes his complaint. The optician runs the eyes over for a "little test," charges no fee, alters the frame, and the patient is imbued with the idea that he knows his business, and, instead of returning to the oculist in the future, where he paid a good fee, he goes to the optician who did the "testing free," and gets his glasses. No wonder the optician gets the patient. It is as necessary that the frame should carry the glasses in the proper position, as it is that the lenses should be correct. But in our hurry we have been neglectful of our interests, and the optician has taken advantage of it. It has been my rule for several years to have all my prescriptions made for me, delivering them to the individual, thus keeping them from the opticians, getting more satisfactory work done by the latter, giving better results to the patients. I know that the optician will do better work for me when I send $300 to $400 worth of work a year, than he will for one who gives but $10 or $12, and I can furnish the glasses to the patient as cheaply as he will.

The general practitioner is also at fault; for, unwittingly, he refers "simple cases" to the optician to save the patient expense, believing he will receive his bill quicker. Then, too, I know opticians who give commissions, and, if they give commissions to the oculist, what is the difference to them of giving them to the practitioner? I know that the physicians accept commissions, and I see no crime in it if the oculist accepts them. I have had physicians *ask* for a "rake off." The optician wants to build up a trade, and knows that one patient sent by a physician will send others without the direct influence of the practitioner, and he gets as good prices from the latter as from the other, and saves the "rake off" for himself.

Advertising, *legitimate advertising*, has a great deal to do with the success of the optician, and we are so "hide-bound" with our "code of ethics" that we cannot let the people know what we can do. It is considered "illegitimate" to have on your card, "Glasses properly fitted." I have friends tell me, "Why, I didn't know that you prescribed (or fitted) glasses, I thought you were only an oculist." Simply because I was living entirely within the "code." Our most successful optician has the trade of the city, and gets it by *advertising legitimately*. In every public place he has a neat card with three astigmatic dots which reads, "If all these dots do not look exactly alike

you have *astigmatism*. It should be corrected with glasses, Go to—— *the optician.*" Many of my patients ask why I do not let people know what I can do. I simply have to say it is against the "code." Do they think more highly of me? No. They invite the optician to all their functions, and me to a few. "Money talks," and if you advertise the people will know where to get better work at as reasonable prices. The physicians of our city patronize this man.

It is easy to sum up the whole matter. First, confine the optician to his profession of grinding lenses. Second, furnish him all the measurements for the frames, as well as for the lenses. Third, never send your patient to him if possible to avoid it. Fourth, do not accept his commissions if you do not want him to offer them to the general practitioner. Fifth, if he is giving commissions to the practitioner, point out its harm to the latter, and he will generally cease sending work there. Sixth, protest to the city authorities against licensing the pedlers. I counted ten in five blocks one morning this week, besides the jewelry stores and opticians' stands. Seventh, if unable to have medical restriction placed upon these men, then use all your influence to instruct the people wherein the danger lies, and it will take little time to accomplish the desired results.

A Member: This is certainly a question that demands our attention. I believe it is a matter largely of education. It is very singular and very astonishing to note how rarely the public distinguishes between the physician, the oculist, and the optician. You will often find intelligent, cultured people who will call an optician an oculist. While, perhaps, I cannot endorse Dr. Fisher's discussion of this paper as a whole, there are certainly some very good points in it. Now, I believe, as has been stated heretofore, that one very valuable point in connection with this work is the writing of the prescription. Make your measurements very accurate and send your prescription; if you have a good wholesale man, who does a wholesale business exclusively, send your prescription to such a firm, pay for the prescription and deliver the glasses to the patient yourself. I see no more harm in it, no more commercialism in it than there is in furnishing medicine to a patient in the line of our medical work. That is the way I look at it. There is another point that works to great advantage. If you write your prescription and hand it to your patient, telling him to go to any special optician to get it fitted, you are advertising that optician; you are calling the attention of your patients to him; you are educating that optician. You advertise the optician, you educate the optician, and you mould public opinion in favor of that optician, whereas, if the method is pursued, as has just been outlined, the whole matter is kept to yourself. Then there is another point which I think is a valuable one. I know a physician who has recently located in a town of 10,000 inhabitants, who is a specialist, and it has become very widely known, in a very few months, that he charges $5 for every examination. No difference what kind of a case it may be, the fee is $5. That may be all right in some cases, but I know there are many cases where there is

simply refraction work to be done, and applying that fee to those milder forms of refraction work will drive away a great many people who cannot afford to pay such a fee when they can get the work done free as they suppose. I think the oculist should make it known to the public, especially to those within his list of patients, that, in such cases of refraction, the fee will not be as great as in complicated cases. I believe a great many oculists make a mistake right there.

A. B. NORTON, M.D., New York: In discussing Dr. French's paper I must confess I have given it no special thought. The subject of the optician versus the oculist has been a very important one in the State of New York, during the past two or three years. We all of us know the evils that follow in the wake of the opticians, and it is not necessary for us, before this assemblage of specialists, to recall the innumerable cases that have been maltreated by the opticians in the adjusting of glasses, we have all seen cases of blindness due to their work, and in many cases serious detriment to the patnent's physical health. In New York State there has been a society organized by the opticians, and they call themselves "refracting opticians," to distinguish them from ordinary opticians. This organization, formulated a bill which was presented to our State Legislature for two successive years. That bill, in brief, provided for the formation of a board of examiners after the pattern of our State Medical Examining Board, to license opticians to do refracting work. This society which was seeking this legislation was opposed by the medical profession of both schools, and, while they had great resources, in the way of money, to push their bill through the Legislature, the larger department stores, having opticians in their departments, contributed larger sums; but by good generalship we succeeded in killing the bill in both houses. It is certainly a subject of grave importance this matter of licensing incompetent opticians to do the work of the medical profession, and we made objection to the passage of that bill, on the score that no one should be licensed to do any part of medical work until they had first acquired a medical education. We claimed they had no more right to do that than the druggist had to prescribe for the sick. As to the claim of Dr. French, that the oculist must take up the sale of glasses himself and the fitting of glasses, I hardly know what to suggest. It might, perhaps, be a wise thing for the oculist to do in some places. In large cities, like New York and other cities, there are certainly some opticians who, I believe, would do honest, legitimate work, and such men we should encourage and send our prescriptions to, but I recognize the necessity of oculists in smaller cities doing their own adjusting of glasses. I believe this is a very timely subject, and I am sorry I did not have time to look over the paper before discussing it.

GEORGE W. MCDOWELL, M.D., New York: I can endorse in full what Dr. Fisher says in his discussion of this paper, and there are one or two points to which I would like to call special attention. I did

not hear the reading of the main paper. Dr. Fisher emphasized the necessity for measurement of the frames, and that is a point well taken, because, in some cases, we have an abnormal condition of the eyes, where the pupillary distance of the two eyes varies a quarter of an inch. The optician may not notice it, and if we are not in the habit of fitting frames we may overlook it ourselves, and the patient may return to complain of the effect of the glasses. I had one or two cases come back, and found there was a difference of a quarter of an inch, but having the glasses set right, remedied the defect. The main point to be considered is the fact that our own physicians send cases to the optician. If we can correct that evil, we can control the other, by legislation very easily, but until we educate our own men to the necessity of having the examination made by a skilled oculist, I do not think we had better attempt to control the prescribing by opticians, for certainly physicians ought to know that the eye is so important an organ that it cannot be trifled with. Ordinarily, physicians do not send their patients to the bone-setter, or their confinement cases to the midwife. The surgeons do not send their cases of peritonitis to the homœopathic pharmacy to be prescribed for, and why we should send refraction cases to the optician, who, in a large majority of cases, is unable to diagnose abnormal conditions of the eye, is beyond my comprehension.

E. Elmer Keeler, M.D., Syracuse, N. Y.: As has already been said, this is a subject of perhaps more interest to the physician practising in smaller cities than it is to those in a large metropolis. It certainly is a matter of vital interest to all those in places of this size (Omaha) and smaller. The strong point that these refractionists make is the one they prominently display, the announcement that eyes are examined free. It is something that counts with patients, and I do not think it right that they should go to a quack, under the impression that they are saving money, and then pay him more than a competent oculist would charge. I have in mind a case where a woman paid one of these so-called "Doctors of Refraction" $20 for two pair of glasses, representing not over $5 of capital invested, and an hour of his valuable time.

I think if we show them that with our examination, for which we will charge them a considerate fee, the price of the lens which we will secure for them will not cost them as much as the same lens prescribed by the opticians, it will be to our mutual advantage, and it may be done in such a way that we will not injure ourselves professionally.

After concluding our examination send the prescription to a trustworthy wholesale optician, whose price-list you may have at hand, and show the patient just what you are going to save him.

In cities of 200,000 and under it is dangerous to place a prescription in the hands of an optician.

In the way I have indicated we will protect both ourselves and our patients.

Necessity of Good Vision in those Employed in the Railway and Marine Service.

By F. Park Lewis, M.D., Buffalo, N. Y.

With the complexity of life that follows as an inevitable result on advanced civilization, comes an increase in travel. In the days of the stage-coach, it was an event of no inconsiderable importance to make a journey of several hundred miles, while to cross the ocean was an undertaking involving much consideration and many weeks of time. But as new colonies were opened up, with the steam-engine came greater facility and comfort in travel. The pathways of the ocean were almost endless processions of living freight, while the land became so reticulated with railroad tracks that the enormous number of those moving from point to point on the surface, elevated, and underground ways of our crowded cities, speeding from end to end of our greatest States, and crossing to and fro on the continent, were no inconsiderable portion of our total population. As travel grew, it became recognized that upon the keenness of vision of those to whom were intrusted the guidance of countless lives depended the safety of the train or vessel under their control. Spinning at great speed, by day and by night, the rapid determination of a signal must determine whether the course be one of safety or of danger; but it was not until a frightful accident occurred at Lagerlunde, in Sweden, in 1875, when two express trains collided—due, it was found, to a visual defect of an engineer, that the immediate and practical importance of the subject became apparent. There are to-day over one million men employed in the railroad service of the United States, and while, of course, not all of these are engaged in running the trains, it may be a surprise to many to learn that there are no uniform laws, and, indeed, in only three States any laws at all, governing the visual tests of railway engineers and firemen.

The Nature of Defects that may Endanger Public Safety is two-fold; first, a low visual acuity; second, a defective color-sense. A few words should be said in regard to each.

Normal clearness of vision may be said to exist when parallel rays of light are brought to a focus on the retina without artificial aid. A star to the unaided eye is clear cut and definite. No rays shoot from its edges, and it is not enveloped in a halo or mist in a clear sky. The experimental angle of such rays is that of one minute. The practical test employed is a series of letters, so arranged, that at a given distance the body of the letter forms with the yellow spot of the retina as its

apex, an angle of five minutes. This angle has been chosen because it corresponds well with letters that may be divided into five parts. Upon the usual test-cards, rows of letters of graduated size are placed, and the card suspended in a good light at a distance of five metres. Letters of a certain size should be clearly read with each eye at that distance. Letters of the next size ought to be easily read at six metres—the distance increasing with the size of the test-letter until the visual distance for the larger letter is sixty metres.

The subject of the investigation being seated at the proper distance the formula will be V (representing vision), equals a fraction represented by the distance at which the letters are seen, divided by the distance at which they should be seen.

Should the vision be found to be less than normal from any cause whatsoever, the applicant is unfitted for the responsible position of railway engineer or marine helmsman.

The causes upon which defective vision may depend are congenital defects and acquired diseases.

Refractive errors of sufficiently high degree—myopia, astigmatism, or hyperopia, defective retinal perception (amblyopia), eye diseases that have occurred in childhood affecting the deeper structures, may all lessen the visual acuity; and, hence, every railway employee should have his sight accurately tested before being admitted to the service.

Visual defects may arise at any period of life as the result of injuries, excessive use of tobacco or alcohol, or diseases of the eyes, and, almost always, with advancing age comes lessened keenness of sight, and, hence, visual tests should be made annually in order that defects may be discovered as soon as possible after they occur.

The second defect which may exist, and which is of greater importance, because it is less obvious, and, therefore, less easily discovered, often, indeed, being unknown to the subject of it is—

Color Blindness, or Diminished Color Perception.—Dr. Pole, who was red blind, and who carefully analyzed his own case, described the condition in an exceedingly interesting way.

As long ago as 1859, in the *Philosophical Transactions*, he says, "It is only after long and careful investigation that I come to the conclusion that my sensations of color are limited to blue and yellow. But before I found this out, that is, for nearly thirty years of my life, that what I now know to be only differences in tone of one or the other of these, were different colors, and hence I was in the habit of talking of red, crimson, scarlet, green, brown, purple, pink, orange, etc., not, of course, with the confidence of normal eyes, but still with a full belief that I saw them. If, therefore, at that time any scientific man had examined me, I should have given him a description of my case, which I now, after more careful study, know would have been entirely wrong. I should have told him among other incorrect statements that I saw red objects of a full tone, such as vermilion, a soldier's coat, etc., perfectly well, and I could, if necessary, have supported my assertion by naming correctly a great variety of bodies having this

color, which, indeed, I am in the habit of doing every day." If an educated observer could be so misled by his own eyes the frequency with which such a defect would escape common observation will be self-evident.

Color deficiencies are of two kinds: that which results from disease of the perceptive elements, and which is commonly associated with imperfect sight, and which is not very common, and that which is congenital and which may be present with otherwise perfect vision. Oddly enough, and having importance in this connection, it is much more common in men than in women, total color-blindness being almost unknown in women. It passes commonly from grandfather to the grandsons, the immediate descendants and the females of the family commonly escaping. It is a much more frequent defect than is generally supposed. In 71,994 males examined, 2,653, or 3.69 per cent., were found to be color blind; while in 15,853 females but 14, or .08 per cent., had color defect. The percentage variees but little among those of the various nationalities. It is not necessary here to discuss the nature of the defect.

Suffice it to say that physicists believe the retina capable of recognizing but three fundamental color tones, those toward the extremes and that in the middle of the visible spectrum—*i.e.*, red, green, and blue. The other visible spectral colors and shades are made by modifications of these. If through an inborn inability on the part of the retinal elements to recognize the impressions made by light waves of an amplitude such as conveys to the normal eye the sensation of color, all chromatic objects appear uniformly gray, and no distinctions are made. This constitutes total color blindness.

If there is a failure of response to wave lengths corresponding to red, all colors of which red is a constituent element are modified by the elimination of this color. If the object looked upon is dark-red, the lower end of the visible spectrum, it cannot be seen upon a black surface; as it approaches the lighter tones it is confounded with yellow and blue. This constitutes red blindness.

If one lack all the middle elements of the spectrum, seeing only blue and red, the green and all colors into which it enters are modified by its absence. Blue is correctly distinguished, and green appears to be red or gray. This is green blindness.

The shortening of the spectrum by the absence of its latter end is less common and less important. Blue is, here, usually confused with green, purple with red, orange with yellow, and violet with yellow, green, or gray. This is blue or violet blindness.

The importance of all of this will be evident when it is borne in mind that the color signals constantly employed in our railroad and marine service are red, green, and white. To one who is blind to red, a red signal would appear green or yellow, according to the saturation of the light; to one blind to green, a red signal would appear grayish-red or grayish-yellow. It will be seen that a danger signal, flashed in warning, might be readily taken by one unable to realize its significance

as a sign of safety, as has, indeed, been done, and a train or a vessel, freighted with human lives, be dashed to destruction.

How Color Blindness is Detected.—It would appear that the most simple method of discovering this defect would be by means of colored lights, such as are employed in actual service. The inaccuracy of this method has led to a variety of more practical and more certain tests. Among those that are most commonly employed, is the matching of skeins of wools, carefully arranged for the purpose, with certain standards representing the three fundamental spectral tones. A failure to meet this test accurately not only determines the presence of color blindness, but the kind of deficient color sense, and whether it is complete or partial. For details of method, reference may be made to many text-books on the subject.

What is being Done for its Detection among Railway Employees.—It would be supposed that a subject that had engaged the careful attention of some of the best minds in the world, and the importance of which had been demonstrated, would require no further exploitation; that railway officials, for their own, as well as for their patrons' safety, would see to it that suitable tests were made to prevent the employment, in responsible positions, of those having color defects.

While it is a fact, however, that throughout the civilized world much attention is given to this subject, in the various countries of Europe and in the United States, there is no uniform and standard test required. In Italy and France, where the railroads are under private control, tests are made, but are not required by law; neither are there government regulations in England. In Germany, tests are prescribed by law, but the methods vary in the different sections. In the United States, only Ohio, Massachusetts, and Alabama have laws governing the color tests for railroad employees; and in the last State only are they said to be satisfactorily carried out. In order that the writer might learn what was being done upon the railroads in the State of New York, he wrote to the management of all the leading lines centring in Buffalo. The answers received showed that the methods varied materially.

Several of them employ the system recommended by Dr. William Thompson, of Philadelphia, and now adopted by twenty-four of the leading Pennsylvania railroads. In this test a stick is employed to which are attached yarns of various colors, which the applicant must correctly match. Others use colored globes on which lights are flashed. Some of the roads issue pamphlets, giving most explicit directions to their agents for making correct tests. The roads requiring accurate tests issue blanks which the examiner must fill at the time that the tests are made. That which is appended is the blank of the Buffalo, Rochester, & Pittsburgh Railroad Company, and is a fair sample of all.

(Form 267)

BUFFALO, ROCHESTER & PITTSBURGH RAILWAY CO.

_____ *18*

EXAMINATION OF SIGHT AND HEARING OF

_____ *Aged,* _____

Employed as _____

Applicant for _____

ACUTENESS OF VISION. The number of the series seen at 20 feet distant.		RANGE OF VISION.		
		Least number of inches at which type D—0, 5, in test type pamphlet can be read	Right Eye, ...Inches	Left Eye, ...Inches
Right Eye,		FIELD OF VISION.		
Left Eye,		Good or Defective,		

COLOR SENSE.

TEST SKEIN SUBMITTED	NAME GIVEN	Flag Shown.	Name and Use Given	NUMBERS SELECTED	PROMPT OR HESITATING
A—Green,					
B—Rose,					
C—Red,					

	CORNEA	ASTIGMATISM	LENS	FUNDUS
Right Eye,				
Left Eye,				

HEARING.

RIGHT EAR.		LEFT EAR.	
WATCH	CONVERSATION	WATCH	CONVERSATION
.....Feet.	.....Feet	.....Feet	.....Feet

REMARKS.

_____

_____

_____

_____ *Examiner.*

To those who successfully pass the examination a certificate is issued, similar to that here given.

THE NEW YORK, CHICAGO & ST. LOUIS RAILROAD CO.

No.....

.....Division.

CERTIFICATE OF EXAMINATION FOR COLOR-SENSE, SIGHT, AND HEARING.

This is to certify, that on.....189....Mr.....employed as.....was subjected to the Standard Examination, and that he is not disqualified for such position by color blindness, nor other defective sight or hearing.

.....
Approved .....Sup't. ..... } Examiners.

On many roads in the United States no tests are made whatever. There seems to be but one essential reason for this, and that is, that the authorities are not yet aware of the prevalence of the defect and the dangers to which it can give rise. If they were, they would at once realize that in case of accident, where no test has been made to demonstrate the existence of good vision, their liability is greatly increased in suits for damages.

The New York State Law, is one very brief on this point; it is as follows:

"Any railroad corporation may employ any inhabitant of the State, of the age of twenty-one years, not addicted to the use of intoxicating liquors, as a car driver, conductor, motorman, or gripman, or in any other capacity, if fit and competent; therefore, all applicants for positions as motormen or gripmen, on any street surface railroad in their State, shall be subjected to a thorough examination by the officers of the corporation as to their habits, physical ability, and intelligence.

"Any person unable to read the time-table of a railroad and ordinary handwriting, who acts as an engineer, or runs a locomotive, or train on any railroad in their State; or any person who, in his own behalf, or in the behalf of any other person or corporation, knowingly employs a person so unable to read to act as such engineer, or to run any such locomotive, is guilty of a misdemeanor."

What should be done in a matter of such vital importance to the travelling public? Uniform laws should exist throughout the country. If possible, these should emanate from the National Government; if not, then, suitable State laws should be enacted throughout the land. These should be originated and successfully pushed to a conclusion by a committee specially appointed by this society for that purpose, and

the writer would urge that such a committee be appointed, backed by the full authority of this society, to secure the enactment of such railroad legislation as will assure greater safety to the travelling public.

Discussion.

C. H. Helfrich, M.D., New York: Many oculists have investigated this subject very thoroughly, and its importance to the welfare of the travelling public has been repeatedly pointed out.

While in accord with the general sentiment of the paper, I think the author is too sweeping in his requirements, and would bar from employment many competent and perfectly safe men.

His limitation, "no man except one with perfect vision, etc," excludes all those whose vision might be made perfect with glasses, which is a manifest injustice.

Again, with reference to color-blindness, his requirements are too exacting. Eldridge Price, whose investigations upon this subject are very exhaustive, only found it necessary to restrict three classes. One class in which red is confounded with green and *vice versa;* second, in which white is mistaken for green or red and *vice versa;* and third, in which white is mistaken for black.

William R. King, M.D., Washington, D.C.: Dr. Helfrich's remarks meet with my approval regarding the evil effect of placing all cases of defective vision under this class of employees. I do not think it is necessary. I think it is proper to prevent the employment of men in whom a defect exists such as would interfere with their duties, but milder cases can be speedily cured by the employment of proper remedies, under which circumstances such individuals become just as useful as those with natural perfect vision. It seems to me it would be a very difficult matter to attempt to limit the employment on railroads and steamships to those only who have normal vision. There is one point in regard to color-blindness that is worthy of consideration, and that is, that it may be temporary. This was brought to my attention particularly the past few months. I have had a number of cases of toxic amblyopia, among which were three cases of tobacco amblyopia. I found the color sense, particularly in regard to red and green, was entirely absent. If those cases had been examined at that time by our railway surgeons they would have been thrown out, and I understand, a number of our railroads, especially in the West, give only one examination to an employee. I treated those cases; and with proper treatment vision was not only restored, which was very deficient, but the color sense was restored, and those same individuals could now pass a good examination before any board of railway surgeons.

REPORT

OF THE

SECTION IN NEUROLOGY.

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Sectional Address.

BY W. H. KING, M.D., NEW YORK.

Gentlemen of the American Institute:

Last year, acting on the recommendation of President Custis, there was a change made in this bureau by the addition to the old Bureau of Nervous and Mental Diseases of the department of Electro-therapeutics. While there are objections to an organic connection between a subject purely therapeutical, particularly when its therapeutic range is general, and a limited class of diseases, there are many reasons why these

two subjects may be brought together in one bureau with profit to all concerned. The discovery of the galvanic current was due to its action on a nerve, and almost the entire sphere of action of electricity was for years limited to its action on nerves. When we come to look over the field to-day, from an electro-medical stand-point, we find, with few exceptions, that nearly the entire field of electro-therapeutics is based on its action on the nervous system. I do not intend to convey the idea that the use of electricity is confined to the diseases of the nervous system only as they are classified in this bureau, but no matter what class of disease we treat, it is due largely to the action of the current on the nerves of that part that the results are accomplished. Take gynecology, if we were to obliterate all action of the current on the pelvic nerve, we would be very much restricted in our usefulness in that particular branch. There is, therefore, no inconsistency in the joining of these two branches, even if there were not much in each subject that is absolutely necessary to the other. The electro-therapeutist who does not have a good understanding of pathology, and the requisite knowledge for a thorough diagnosis of nervous diseases, is no more than a quack. There is no branch of therapeutics in which such knowledge is so indispensable; on the other hand, of such importance is electro-therapeutics in the therapeutics of nervous diseases, that the nervous specialist who is ignorant of its nature, and fails to keep abreast of the advances in it, is guilty of a neglect for which all moral law may justly hold him responsible.

The number and importance of the papers for presentation at this meeting are about equally divided, covering a very broad scope in the domain of medicine, and as this meeting is, I believe, one of the largest ever gathered together to hear the report of this bureau, we see no reason why, in the future, it should not become one of the most popular bureaus of the Institute.

The Nervous Symptoms of Pregnancy.

By C. T. Hood, M.D., Professor of Mental and Nervous Diseases, Chicago Homœopathic Medical College.

The reflex symptoms accompanying pregnancy have quite frequently been discussed by the obstetrician and the general practitioner, but, so far as I am aware, they have not been discussed by the neurologist.

The excuse offered for the selection of this subject is that out of this paper, and its discussion, some practical points may be gained.

The pregnant state is a physiological state. But as the result of civilization, habits of dress, mode of living, and heredity, the greater number of cases are complicated with some pathological condition. So that what was intended to be a normal physiological process, becomes an abnormal physiological process, accompanied by nervous reflex symptoms.

It is usually conceded by the laity that the reflex nervous symptoms attending the pregnant state, are to be taken as a matter of course, as a part of the inconvenience and distress a woman must have and endure during her pregnancy, and in this opinion many of the profession concur.

Such is not the case; a normal gestation or a physiological gestation is devoid of reflex symptoms; but in order to have a perfectly normal gestation it is necessary that you have a perfectly normal woman, with normal surroundings and heredity.

The nervous reflex symptoms of pregnancy may be divided into:

1st. Those resulting from pre-existing pathological conditions.

2d. Those due to pressure.

3d. Those due to abnormal states of the blood and nutrition.

Of the pre-existing pathological conditions that give rise to nervous reflex symptoms may be mentioned:

Laceration of the cervix and perineum, ulceration or inflammation of the cervix and cervical canal, chronic endometritis and metritis, inflammatory infiltration of the broad ligaments, salpingitis, ovarian growths, and diseases with or without adhesions. Uterine misplacements, especially retroversion, lateral version, with or without adhesions, unnaturally tight sphincter ani or vagini with vaginitis. Rectal conditions, as pockets, papilla, hemorrhoids, but especially erosion of the rectal mucosa and fissures. Fibroid tumors are not to be forgotten.

When we remember what a vast number of women of the present generation have one or more of those pathological conditions, it is not

to be wondered, that what was intended to be a normal physiological process becomes an abnormal physiological process.

In order that we may study the nerve-reflexes of the pregnant state, resulting from these pre-existing pathological conditions, it is necessary that we take a bird's-eye view of the anatomical nervous connections.

The spinal nerves most often implicated in the pregnant state are the sciatic nerves, the gluteal nerves, the external cutaneous, the anterior crural nerves, genito-crural obturator nerves, internal pudic, and its branches, and sacral plexus.

It will be remembered that the small sciatic nerve supplies the gluteal region and part of the posterior portion of the leg; that the great sciatic supplies the posterior portion of the leg and its branches, the heel and under part of the foot, and that one of its branches, the external peroneal, supplies the outer part of the anterior portion of the leg below the knee.

The gluteal nerves supply the superior gluteal region.

The external cutaneous supplies the anterior and outer part of the thigh as far as the knee as well as the integument over the crest of the ilium.

The genito-crural nerve passes through the internal abdominal ring to the round ligament, which it supplies as well as the skin of the anterior portion of the thigh as far as midway between the pelvis and knee.

The obturator nerves supply the articulation of the hip and knee. The anterior crural nerve is one of great importance, as it is quite frequently involved in the pregnant state. It will be remembered it is the largest branch of the lumbar plexus. It supplies the muscles of the front and inner part of the thigh, leg, and foot.

The sacral nerves supply some of the gluteal muscles, and integument over the branches from the fourth anterior sacral nerve communicates with the sympathetic nerves. They supply the rectum, bladder, vagina, levator ani, coccygeus, and external sphincter ani, and the integument between the coccyx and anus.

Of the sacral plexus the pudic is to be remembered; from it we have a branch to the clitoris, the labia, and perineum.

The sympathetic connections of the parts involved in the pregnant state must also be reviewed. To appreciate the sympathetic connections we must remember that we may have a lacerated cervix or perineum, inflammatory conditions of the cervix, or cervical canal, or endometrium, together with pathological states of ligaments, ovarian tubes, and rectum.

The sympathetic nerves of the vagina and rectum terminate in the uterine cervical ganglion. The sympathetic nerves of the bladder unite to form the vesical ganglia before connecting with the uterine cervical ganglia. Quite a large number of sympathetic nerve-fibres from the posterior portion of the uterus, as well as from the ovary and Fallopian tube are derived from the hypogastric plexus, and not from

the uterine cervical ganglia. The sacral nerves are connected to the uterine cervical ganglia by quite a number of large branches.

The vaginal, uterine, rectal, ovarian tubular and vesical branches and ganglia, are all connected with the hypogastric plexus.

The hypogastric plexus is connected with the genital ganglia, and they in turn with the abdominal train which supplies the digestive and abdominal eliminating organ.

This chain of sympathetic ganglia lies along the promontory of the coccyx, sacrum, and bodies of the spinal vertebræ.

Beginning at the promontory of the sacrum there are also ganglia of sympathetic nerves lying along the side of the bodies of the spinal vertebræ, and extending to, and sending branches into the head.

The abdominal train, or solar plexus, as it is familiarly known, is connected to the pneumogastric and phrenic nerves, as well as with the chain of sympathetic ganglia that lie along the side of the vertebræ.

By the sympathetic connections the abdominal brain and pelvic ganglia are connected with the cervical ganglia, and through it with Wrisberg's ganglia, or the heart sympathetic ganglia, and also with the cardiac nerves. Extending up we have the sympathetic connections with the spinal accessory, hypoglossal, and laryngeal nerves.

Through the vagus connection with the heart ganglia, we have the sympathetic nerve in communication with the medulla.

The chain of sympathetic nerve-ganglia is also connected with the fifth nerve and ophthalmic nerve.

Usually the first reflex nervous symptom to show itself after pregnancy has ensued is vesical irritation, the result of irritation of the uterine cervical ganglia, by its uterine branches, which irritation is communicated to the vesical ganglia, and through it to the uterine cervical ganglia. With this vesical irritation not infrequently occurs an obstinate constipation, not due to pressure, but due to irritation of the sympathetic fibres from the uterine cervical ganglia supplying the rectum and descending colon and sigmoid flexure and internal sphincter ani, resulting in a torpidity of the rectum and lower colon. With these symptoms we are apt to have renal insufficiency, resulting in a decrease of the flow of urine, although we may have an increased flow of light urine. It is the result of irritation of the renal ganglia from transmitted irritation of the uterine cervical ganglia.

Not infrequently there occurs, during the early period of pregnancy, an increased sexual desire, amounting in some cases to nymphomania.

It is the result of irritation of branches of the sympathetic nerve from the hypogastric plexus which supply the uterus, ovaries, and tubes, transmitted to the plexus, and from it to the branches of the lumbar and sacral nerves, resulting in an irritation of the sexual centre of the cord.

The next symptoms to show themselves are the digestive symptoms, such as nausea, vomiting, heartburn, or water-brash, with a fermentative despepsia, especially intestinal, and a gone, empty feeling, or intense desire for some particular article of diet or intense hunger.

These symptoms are the result of irritation of the abdominal train, transmitted to it from the uterine cervical ganglia, through the hypogastric plexus, resulting in deranged secretions of the stomach, intestines, liver, and pancreas, as well as irritation of the vagi.

Cardiac symptoms quite frequently occur, such as palpitation, irregular heart action, and fainting. These symptoms are the result of irritation of the vagii and cardiac nerves, from irritation of the uterine cervical ganglia transmitted through the hypogastric plexus and abdominal train, and by the lateral chain of ganglia to the cardiac nerves.

Facial neuralgia often occurs, and is the result of irritation transmitted by the lateral ganglia to the sympathetic on the fifth nerve.

Abnormal desires, as for chalk, slate pencils, or some particular diet, is the result of irritation transmitted by the lateral ganglia to the hypogastric nerve, and through its branches to the gustatory nerve, and also to the fifth nerve.

Chorea not infrequently occurs, and is, I think, almost always of the spinal variety, resulting from the irritation of the spinal nerves through their connection with the sympathetic.

The most common form of chorea is that involving the muscles supplied by the spinal accessory nerves, due to direct irritation of these nerves through their sympathetic connections.

Mania.—The mania of the pregnant state is not to be confounded with puerperal mania, although mania occurring during the pregnant state may continue after labor.

Mania occurring during the period of gestation is usually the result of irritation of the sympathetic ganglia, and transmitted to the vasomotor nerves of the arterioles of the frontal lobes, resulting in dilation or contraction of the arterioles of the cortex of the brain.

In this may also occur some cases of cortical chorea.

Mania may also occur from auto-intoxication, of which we will speak later.

A lacerated perineum allowing the uterus to drop, producing irritation of the uterine cervical ganglia, may cause any of these symptoms. So may rectal conditions of any kind. So may a lacerated cervix or inflammation of the cervical canal, or a chronic endometritis or metritis. So may an inflammatory condition of the broad ligaments, ovaries, or tubes. A retroverted uterus, a lateral displaced uterus, especially if complicated with adhesions, will always cause irritation to a marked degree.

It will be seen, then, that these pre-existing pathological conditions demand careful attention and treatment, and that we are not justifiable in simply taking for granted that reflex symptoms occurring during the pregnant state must exist.

The symptoms resulting from pressure are pains in the gluteal region from irritation of the gluteal and small sciatic nerves.

Pain down the back of the leg and to the heel and sole of the foot, as well as on the anterior and outer part of the leg from the knee down, due to irritation of the great sciatic.

Pain and other sensations on the outer part of the thigh as far as the knee and along the crest of the ilium, especially during the later months of pregnancy, due to irritation of the external cutaneous nerve.

Pain in the internal abdominal ring and anterior portion of the thigh from irritation of the genito-crural nerve.

Pain in the articulations of the hip and knee from irritation of the obturator nerves.

Pain in the upper and inner part of the thigh and inner part of the knee from irritation of the anterior crural nerve, especially is this true if the case is one with a pre-existing inflammatory condition of ovaries, tubes, or broad ligaments, or a lateral displacement of the uterus.

Pain in the bladder and between the coccyx and anus from irritation of the sacral nerves.

Pain and irritation of the clitoris and perineum from irritation of the pudic nerves.

During the later months constipation is, as a rule, due to pressure.

Whether uræmia and its phenomena are always due to pressure is a question.

That renal insufficiency can be, and often is, due to pressure there can be no doubt. But uræmic symptoms often occur when no albumin is present in the urine, and are due to the intestinal auto-intoxication as well as to vasomotor disturbance in the glomeruli.

Vesical irritation may also result from pressure in the later months.

Of the abnormal states of blood the most important is uræmia, which, as has been said, is due to pressure, auto-intoxication, and vasomotor conditions.

There can be no doubt but that in some cases of pregnancy there is an over-production of red blood-cells, more than is necessary for the nutrition of the mother and child, so that a plethoric condition exists. This hyperæmia results in the formation of new tissue in various portions of the body, and is also the cause of the persistent insomnia that so often occurs with the pregnant state.

These abnormal states of nutrition and blood can be corrected by proper attention to the elementary organs and diet.

It is not our intention to discuss the treatment of these reflex symptoms, but rather to call attention to their nervous etiology. Any remedy in the materia medica may be indicated, but you have all noticed how quickly the indicated remedy wears out, and it is because of the existence of some pathological condition that should be corrected.

Discussion.

H. V. Halbert, M.D., Chicago, Ill.: Professor Hood's paper is very interesting to me, because it gives anatomical explanations for symptoms which, heretofore, have been only referred to. For that reason his paper

will grow with age, and will, I hope, form a part of every reference library. For me there is no comfort or information in reading or hearing a neurological paper which does not deal with anatomical facts. There is sufficient in print which appends to neurology all that is uncertain in pathology; what we want is an application of anatomical explanations of neurological symptoms; then we shall know what to do with our local treatments, our remedies, and all the adjuvants of treatment.

We have all realized that the conditions of constipation and renal insufficiency were often due to the reflex disturbances during pregnancy; we have also had some idea of the functional perversions of the heart's action and the irregularities of digestion which appear at this time, though I have never seen them so completely accounted for, anatomically, as in Dr. Hood's paper. His explanation of abnormal desires of the appetite, through the reflex involvement of the gustatory nerve are quite clever, and I shall remember that symptom from reading this paper.

Chorea, from spinal irritation on account of sympathetic irritation, is quite common, and the cure will only come when the spinal centres are relieved from the sympathetic excitement. This is not alone evident in cases of pregnancy, it is often present from any vasomotor disturbance, when the sympathetic system is unduly excited. One feature of this character has been observed by me, which has been more in the line of persistent spinal neurasthenia. It comes on some time after confinement, and the irritation seems to affect mostly the lumbar and cervical segments and the motor nuclei of the medulla as well. Backache, at these points, together with the occipito-vertex headache, or, better, pressure, are quite bothersome and persistent. Associated with them we generally find the fine tremor, the loss of conjunctival reflex, and the spastic gait. These conditions are generally relieved by removing the local irritation, and I have found no remedy better than Picric acid.

L. L. Danforth, M.D., New York: I have been very much interested in the paper presented by Dr. Hood. The intimate relationship which exists between the generative organs and the sympathetic system is a matter of common knowledge, as is also the heightened sensibility of the latter during pregnancy. Dr. Hood wisely calls attention to the fact that pregnancy is a physiological state, and as such we should endeavor to consider it. But, as I listened to the essayist and the discussions, it has seemed to me that in our capacity as physicians, with our minds trained to the discovery and treatment of disease, we are very much inclined to forget the physiological and look only for the pathological. Dr. Hood has done well to call our attention to the physiology of the sympathetic system, but in pregnancy many disturbances which, under other conditions, would be pathological, in this state are merely exaggerated physiology, or physiology working under difficulties. The progress to the pathological is a mere difference of

degree oftentimes, and it is a wise physician who can detect the dividing line.

Dr. Hood spoke of the tendency to kidney disorders in pregnancy, as a result of reflex nervous influences. I have no doubt kidney disease, at first possibly functional in character but later organic, may be due to the influence of the sympathetic system. We know how seriously the stomach and the functions of the brain may be disturbed; why may not the kidneys be similarly disordered? It was Frankenhauser, I think, who traced filaments of the sympathetic system directly to the nuclei of the epithelial-cells of the secreting tubules. This subject is an interesting one, and well worthy of our attention.

R. LUDLAM, M.D., Chicago, Ill.: I was deprived of the pleasure of hearing this paper read. Incidentally, I may say that the subject is one of vast interest and importance, both in a health and physiological sense. Nothing in the whole history of physiology is more interesting than the old work of William Hunter, brother of the celebrated John Hunter, a marvellous observer. To this day his discussion of the uterine nerves is the most complete of all, and the most satisfactory. It is a very singular thing that they are not generally regarded as they should be by the profession. He substantiated the fact that along with the development of the uterus in the pregnant state the nerve-tissues were developed as well as the others.

Changes occurring in the nerves, are likely to induce similar corresponding troubles in the same way. Naturally enough, if this process shall proceed in the healthy way, without complications for the first pregnancy, there need be no elisions to afflict the mother, and it may come on well.

Dr. HOOD, Essayist: I want to correct one misapprehension that I seem to have left. The title of the paper is the nervous symptoms of pregnancy. The object in writing the paper was, as I have stated already, that out of this paper a better understanding of these nervous phenomena, something might come that would be of benefit to women at large. If I can leave with you, who have heard this paper or those who may read it, only one thought, my time has been well spent. And the very next case of pregnancy that comes under your observation, if it has any nervous phenomena whatever, demands your professional skill, you, as a physician, are not doing your duty if you leave it to have the nausea or headache or backache, and the various pains and various symptoms that have been spoken of here, without making some efforts to relieve the existing pathological condition that is the cause of these symptoms.

The Treatment of Sciatica.

By A. P. Williamson, M.D., Minneapolis, Minn.

True sciatica consists of a perineuritis of the trunk, or some of the branches, of the great sciatic nerve.

The predisposing cause may be set down, without any fear of contradiction, as a gouty or rheumatic diathesis.

The exciting cause may be one of many, but the commonest is exposure to draught of cold air.

As a rule, it comes on suddenly, often following the assumption of a strained position which makes the nerve tense.

The main characteristic is pain, this is often described as cramping, stabbing, or burning, and usually it is very severe.

Its location may vary from the sciatic notch to the dorsum of the foot. Thus it may involve the main trunk or any, or all, of its branches. Sciatica can be diagnosed by tender spots, which are found in certain well-defined localities. These are termed *puncta dolorosa.* Their locations are just above the hip-joint, at the sciatic notch, midway of the thigh posteriorly, just above the popliteal space, in the middle of the calf, back of the external malleolus, and on the instep.

As an occasional complication we find cramps in the muscles, about the hip or the calf, which come in almost unendurable paroxysms.

Sciatic pain is aggravated by motion, by pressure, and by extension of the leg. It rarely attacks both sides at once, but we have noted in several instances the disease subside in one leg and then attack the other.

It seems to prefer men more frequently than women, and chooses those between thirty and forty years of age, but only infancy and extreme old age seem to be exempt.

There is a false variety of the disease which accounts for the readiness with which some practitioners cure it. This consists of rheumatism in some muscle near the nerve, such as the gluteus medius, which produces pressure upon a nerve filament. Relief from this comparatively mild ailment quickly dissipates the pain.

Again, constipation sometimes occasions sciatic pain, then a large injection or the exhibition of a cathartic, is followed by relief. In justice to the "quick cure physicians" it may be stated that the pain has all the agony of the graver disease, and if it is not removed it may proceed to a real perineuritis.

Having thus taken a view of the enemy, we are in position to outline the method to be pursued in making an attack.

The first and most important step in the direction of treatment, is to place the patient in bed and enjoin absolute quiet, rest of body, and peace of mind.

In order to insure freedom from motion in the affected part, a long splint may be used, extending from below the foot to the axilla, or, as we prefer, sand-bags of suitable size, one placed from the foot to the axilla and the other from the foot to the perineum, pressure on the tender spots being avoided by the use of a number of small pillows, six inches by four, which can be tucked in where they seem to be required.

The patient should be encouraged to view the difficulty in as hopeful a light as possible, assuring him that cheerfulness is as necessary for his rapid recovery as any part of the treatment.

Sympathetic friends are very much out of place near a sufferer from sciatica. Kindness should always be shown, but exaggerated sympathy and evident solicitude must never be displayed.

Heat is generally agreeable, and frequently gives very great relief. A large flaxseed-poultice, to which some powdered ginger or mustard is added, is the best method of applying heat. The ever-present and generally leaky hot-water bag occasionally will act as a substitute, but usually it is applied best where it is not needed, hence its use is more gratifying to the friends than to the patient.

Galvanism is of great assistance, too. It should be applied twice a day, for ten or fifteen minutes each time. The negative pole being placed on a neutral spot, such as the lumbar spine, and the positive pole is gently moved along the course of the nerve, stopping for a few minutes at the most painful spots. The strength of the current should be governed by the feelings of the patient and the effect desired by the physician, say from three to ten milliampères. Galvanism is usually preferable to faradism, but still the secondary faradic current certainly has a sedative action, and in some cases seems to be more agreeable to the patient than the continuous current.

The diet is a matter which does not receive the attention its importance demands. Care in this direction is always fully repaid by the good effect produced. The food should be liquid and very nourishing; it is best given in small quantities and at frequent intervals. Pain is said to be the cry of the tissues for nourishment, and if its severity is a criterion of the quantity of food needed there can be little danger of over-feeding.

Milk, with salt to aid its digestibility, especially when given hot, is the very best food to be found. Home-made broths come next, and then the preparations of blood such as bovinine, hæmaboloids and Murdock's food.

The patient's palate may be consulted, however, but care is to be taken to avoid beef and uric-acid forming foods in general.

In this connection it may be well to add a thoroughly recognized fact, but one which cannot be too frequently repeated, that in all diseases of the rheumatic or gouty diathesis large quantities of hot water

should always be given the patient, say from two to four quarts every twenty-four hours. The rectum should always be flushed every day, or every other day, with large injections of as hot water as can be comfortably borne.

Drugs are of course useful, but they are certainly of secondary importance to the foregoing. You will find they are disappointing, too, in their action. Routine prescribing has no place in the treatment of sciatica. The remedy should be selected with great care, and then persistently given.

We intend, at this time, to simply discuss some of the drugs which have been most useful in our experience, and will not try to name all which may be indicated. The remedy most frequently called for is undoubtedly Aconite. It quiets the patient's anxiety, subdues the restlessness, and occasionally subdues the pain.

In examining our case-book we find the remedy we have used next in frequency is Cimicifuga. In some instances it was the only one given, and improvement followed immediately, and continued until cure resulted. It is especially indicated when the whole limb is involved, with great soreness of the muscles.

Ledum has done good service, especially when the disease seems to begin down the leg and progresses upward, or the pain shoots upward. It also helps those obstinate cases where the spot of greatest pain is located near the heel.

Colocynth is another favorite remedy, according to some writers of our works on materia medica. It is certainly often indicated by the shooting pains, or the paroxysms of cramping muscles, with relief by relaxing the affected muscles, but in our experience it has rarely ever shown itself worthy of its endorsements.

We have found, however, that Dioscorea with these indications will at once give the patient ease.

Dioscorea is a neglected remedy in painful diseases. It is worthy of trial in cramping pains, whether they are muscular or nervous in origin.

Ruta is another remedy which we have found useful. It has not received the attention it deserves. It is particularly indicated when the pain is deep-seated and the limb is sensitive to pressure of hard objects, such as the edge of a chair-seat. It helps subacute cases, which are aggravated by changes of the weather, and during the paroxysms the patient is so nervous and irritable that he cannot sit still and finds relief from walking.

In subacute cases, too, Ferri phosphoricum, Gelsemium, and Ignatia may be considered.

In chronic cases Rhus tox., Bryonia, and Plumbum may help the patient, and should be tried. In cases when remedies have failed, and every known mechanical device has proved useless, the static spark applied to the whole length of the nerve has been of permanent service. This may seem like heroic treatment, but we have seen it perform marvels. The static current is a great source of comfort in

nearly every painful affection, its greatest disadvantage is, that it requires a bulky instrument, which cannot be taken to the patient. Doubtless, if the static roller could be applied early in the disease, it would materially lessen the length and severity of the attack in every case.

In acute cases, when the active symptoms have ceased, convalescence may be hastened by judicious massage. Not rubbing or kneading, but gentle manipulation of the small fibres which make up the muscles. It frequently happens that after the enemy has been subdued there will be left a soreness or an uncomfortable feeling in the region of the hip; this can be speedily and permanently relieved with the sinusoidal current, the most useful and generally applicable form of electricity.

Relapses are quite common in sciatica. Patients are quite inclined to "favor" the recently painful limb. This should be absolutely forbidden, and they should be encouraged to use the limb just as if nothing had ever been the matter with it. There is no surer way of inducing a relapse or continuing the tenderness than thus nursing or favoring the limb.

Crutches and canes act as reminders of the late agony, and hence invite its return. The patient should be told that the muscles cannot resume their functions unless their blood supply is restored and the muscles of one leg receive the same exercise as those of the other.

Discussion.

N. B. Delamater, M.D., Chicago, Ill.: This is a valuable and a practicable paper. It needs apparently little discussion in the way of criticism. I think the doctor is apt in one suggestion he makes here, and that is, that in all cases of sciatica (and it would apply to many cases of the same general character) there is something that we may call a dyscrasia behind it. Failure in treatment is as frequently due to a failure to determine that which is behind the sciatic pain or the sciatic inflammation as to any other one cause. The patient should be examined thoroughly at the outset. This examination should include all that can give any possible light on the case. The doctor suggested that certain troubles in the pelvic region might, if continued long enough, produce a later inflammation of the nerves. Now, you should always examine these cases, and know whether, when you first take hold of the case, the patient has had such pelvic trouble, a sufficient time to make it probable that this attack is the result of such pelvic irritation. If such be the case, remove your cause at once.

Another point that he does not bring out in the way of examination is the necessity, absolute necessity, of making a quantitative and qualitative analysis of the urine of the twenty-four hours and for a number of twenty-four hours. We will get in this kind of an examination not only valuable points as to the exact condition of the nutrition, but we will in addition get valuable points in relation to the treatment.

The next point that is of very great importance, I think, is where the doctor speaks of the physical element, both in the acute and in the chronic cases. And another point I wish to emphasize is, that in all these cases the one great thing is rest, rest, rest. And I repeat it over and over again to have it emphasized that we mean rest. I am very much afraid that physicians too infrequently comprehend what rest means. Putting the patients to bed and letting them move their legs as they wish is not giving them rest. When it comes to the general application of the means, those the doctor suggests are good. Your own ingenuity will suggest many ways. But in some way give that particular nerve rest.

C. T. Hood, M.D., Chicago, Ill.: I enjoyed the paper very much, but the doctor ought to have brought out the differential diagnosis more fully. In the early stages, it is true, it is very hard to differentiate between true and false sciatica. But there are very few cases of true sciatica.

There is only one point I wish to call attention to in the treatment of these cases, particularly in the old cases. While there cannot be too much said in regard to rest, the older ones, those who have run along a number of months, demand some passive motion. There is a tendency for the leg to draw up. The passive motion of the limb, while the patient is in bed, moving the leg up until it passes the perpendicular. It will occasion pain to the sciatic nerve, but will, in a measure, be stretched, and may give excellent results.

The Proof of the Law of Similia from the Electro-Chemico-Physiological Stand-point.

By Professor E. H. S. Bailey, M.D., Lawrence, Kan.

In the discussion of this subject the author should perhaps have chosen a more modest title, and, in fact, a more general one, as his paper, although dealing with the action of remedies from the homœopathic point of view, has for its object, especially, the consideration of the action of extremely dilute solutions on the system. It is taken for granted that the administration of remedies in the more or less highly attenuated form is the common practice.

A more direct way of stating the title would be, "A Discussion of the Practice of Homœopathy as Sustained by the Recent Theories of Electrolytic Dissociation." It is a good plan, once in a while, "To see ourselves as others see us," and so it sometimes happens, that a man outside the profession, if in a line closely enough allied, may see applications of truths and generalizations of known facts, as one in the midst of daily, busy practice, does not get time to do. In this light, then, I accede to the kind invitation extended to me, to discuss this subject before you. If any of the points are not clearly brought out, I shall feel obliged to you if you will discuss them more fully.

It has been always the object of the investigator, man, to pry into the secrets of nature and find out, as far as possible the way in which she works. We know that certain causes produce certain effects, long before we discover in what way and by the help of what laws the result is brought about. So we have been groping along with our various theories on light, heat, sound, electricity, and the constitution of matter, for hundreds of years. We believe and know that each hypothesis is a little better than the previous one, and that each theory proves up better than any that has been heretofore imagined. For all these things are a matter of imagination, and strange to say it is not in the world of fiction nor in the realm of poetry alone, that the one who has the most brilliant imagination is considered the most advanced thinker. In science we imagine a cause for the phenomena that we notice and then go to work to prove as many cases as possible in which this cause will fit all the conditions of the problem.

There are some things that we think we know all about, till suddenly the scientific world is awakened from its security by an announcement, right along the old beaten track, of a startling discovery. Such was the finding of argon and helium in the atmosphere, about three years ago. There were hundreds of tons of the argon, or "lazy gas,"

as some have called it, in the air, yet we had never discovered it, simply because it was taking no part in chemical reactions; it was doing nothing, so its presence was not recognized.

We are accustomed to regard matter as existing in the three states of solid, liquid, and gas; and we regard these three state as dependent on conditions of temperature and pressure. Every known gas has been liquefied; this includes, within the last few weeks, hydrogen and helium; and we are familiar with the fact that by the use of liquid air it is possible to obtain a temperature of nearly 250 degrees below zero, Centigrade. Many of the laws of matter in the solid and in the gaseous state have been dug out, but, more recently, it has been left to such men as Ostwald, Pfeffer, Raoult, Arrhenius, Nernst, and a dozen others, to show that the laws that apply to gases apply to solutions as well. This has been proven by careful laboratory and mathematical research. It was not, however, done at a single shrewd guess, but in the ordinary scientific method, by which each experimenter and thinker adds his mite to the accumulating pile of evidence, till finally a great symmetrical theory makes its appearance.

By studying the pressure of some of the gases or vaporized solids, it has been shown that at high temperatures they are broken up into distinct parts, or dissociated. For instance, the common substance, ammonium chloride, breaks up into NH_4 and Cl. Again, the German physicist, Pfeffer, has studied pressure in solutions, as for instance, the pressure of the molecules of sugar in a water solution, and has learned that this osmotic pressure, as it is called, is enormous in quantity, and is proportional to the degree of concentration of the solution. Van't-Hoff says, "The osmotic pressure of a substance in solution is the same pressure that it would exert were it in a gas form, at the same temperature, and occupying the same volume." Further, Arrhenius has shown that "those substances and only those that give abnormal osmotic pressure, are capable of conducting the electric current, and if these substances are dissolved in any other solvent in which they act normally they lose that power."

This immediately brings up the question, how does a solution conduct electricity? It cannot conduct as a wire would, for the solution is decomposed and the wire is not. Grotthus assumed that the electricity was carried bodily, we may say, by particles of the dissolved substance from one pole to the other, and when the particles arrive at the poles they discharge their electricity. Many years ago Faraday gave the name "ions" (i-o-n-s), to the little particles of matter which carry the electricity from one pole to the other. Now we have come to believe that all substances in solution, which conduct electricity, do so by means of ions, and these ions are the broken-up molecules. I admit that it is difficult to conceive of these ions; they are not really independent particles, but particles that can move independently of any other ions, for each ion is under the influence of some other ion, which has the opposite sign; if one is plus the other is minus. The conclusion has been reached that aqueous solutions of substances which con-

duct electricity, or electrolytes, as they are called, consist, in part or wholly, of separate ions. These ions respond to the slightest impulse, hence they must move independently of each other. Referring again to the difficulty of conceiving what the ions are, Ostwald says, in the case of potassium chloride, for instance, we do not recognize the gas chlorine, nor the metal potassium in the solution, and we cannot readily understand how the dissociation can have taken place. But the elements as we know them are molecular combinations in the case of chlorine of two atoms, and in the case of potassium of an unknown number of atoms. No one ever pretends that he has seen an atom of any element; for the atom cannot exist, by its very definition, uncombined. The chlorine and the potassium in solutions may be regarded as the elements in the atomic condition. Again, the elements contained in this solution are charged with enormous quantities of electricity, positive and negative respectively, and we should not expect these particles to behave as molecules of the salt behave.

One point more; in the case of a metallic salt, or of a strong acid or base, when this is in solution, a part of the substance exists as the original molecule, and a part is dissociated into its ions, and as the solution is diluted, more and more ions are formed, till, finally, the solution is in a complete state of dissociation, that is, all the particles are ions. This point of dilution differs greatly for different substances. The properties of a dilute solution must depend, then, on the binary properties of its free ions, and not on the properties of the original salt dissolved.

This much has been said, by way of preface, so that the generally accepted theory of solutions, which we propose to apply to the action of dilute solutions upon the mucous surfaces of the body, may be thoroughly understood.

The proposition that we intend to discuss is this; is it not probable that in concentrated solutions of remedial agents we get essentially the action of inactive particles on the system, while in the dilute solutions we get the action of the active particles, or the dissociated molecules? Electrolytic dissociation was first announced by Arrhenius in 1887. He divided the molecules in solution into two classes; the inactive ones, which can split up into ions as noted above, and the active ones, or those that already exist in the solution as ions. The inactive particles do not take any part in conducting the current; it is only the ions that do this. And is it not also probable that the action of the ions on the system would be entirely different from that of the undissociated molecules?

The first reason to suppose the above proposition is true, is that in chemical reactions between different substances in solution, or solates, as they are called, no action takes place between the substances as a whole, but only between the ions of the substances. It is proper to infer from this, that if the ions only act chemically these will be the particles that will act therapeutically when brought in contact with an absorbing surface of the body. To illustrate this theory with reference

to chemical action: a common test for sulphuric acid or a sulphate is barium chloride, and it makes no difference whether the acid be free or combined, a white precipitate results from the mixing of these two substances. If sodium sulphate is examined it is assumed that the SO_4 ion unites with the Ba ion, and the molecule of $BaSO_4$ results. The same thing is true of the use of silver nitrate as a test for chlorine, or any chloride. Where there is a free chlorine ion the silver salt unites with it, but in the case of potassium perchlorate ($KClO_4$), where the ions are K and ClO_4, there being no free chlorine ion, there is no precipitation by silver nitrate. Reasoning by analogy, what is true of the action of chemical compounds will be true of the action of remedial agents on the system. Then the dissociated particles, which it has been shown are present in a greater quantity proportionally in dilute solutions, will be the ones that will be absorbed and will act.

Second. It has been recently shown that only dissociated substances act as germicides. In other words, the solutions of substances, be they never so powerful, according to these researches, if they are not in a condition to be ionized, produce no effect on the bacteria. Everyone who has experimented with such an antiseptic as corrosive sublimate, knows that it will act in extremely dilute solutions; it is asserted on good authority that one part in 15,000 is effective as an antiseptic, and that a solution of one in 300,000 has a decided influence in restraining the growth of some spores. Some of your own number have even reported that a solution of 1 to 1 plus 24 0's was fatal to certain lower forms of life. A solution of silver nitrate one to 1-600,000 inhibits the growth of Aspergillus niger, and sufficient silver was dissolved by the action of water on a silver dish, so that the organism could not live in it. Is this not an illustration of ionization? Are these minute, delicate organisms not susceptible to the ions of dissociated substances, as they could never be to the undissociated molecule?

Third. It is a common practice among Homœopathists, in case very early action of a remedy is desired, to dissolve some of the substance in water, and to direct that small portions shall be taken at intervals. This exactly fits into the method that would be suggested by the dissociation theory. In the dilute aqueous solution we should expect complete dissociation to take place, and we should have the ions free and undisturbed by a large quantity of undissociated molecules, to act on the system. These conditions are then more favorable for speedy action than any other that we can conceive. The practice may be old; the reason for this practice, if we accept this theory, is apparent.

Fourth. It is also a practice to administer a remedy upon the tongue. This may be exhibited in the form of a triturate with milk-sugar, or some inactive substance. What are the conditions here? There would be comparatively only a few molecules in the powder that is placed on the tongue, this dissolves in the saliva, and there is nearly complete ionization; in other words it acts as a dilute solution. These ions are quickly absorbed by the mucous surface, and act on the

system. We may not understand how the particles get into the circulation so quickly, but it is a fact that cannot be contraverted, that a remedy is very quickly taken up by this method of administration.

Your speaker had a good illustration of this fact a few years ago, when, in order to taste the sweetness of nitro-glycerine (glonoin, if you prefer), he licked an open cartridge. The effect with which you are familiar; violent throbbing in the temple, paleness, and faintness was apparent almost instantly. All practitioners agree in the rapidity of absorption in this way. It is stated that one-thousandth of a grain of Aconite, held in solution in water, dropped on the tongue, will cause a numbness that will last for an hour.

Fifth. When we are dealing with mineral acids and strong bases it has been found that here the ionization is quite complete, even in solutions that are not very dilute. As we progress in the direction of weaker acids and bases and organic acids, the ionization is not as complete in ordinary solutions; that is, dilution must be carried farther to obtain complete dissociation. Sulphuric acid is dissociated into H_2 and SO_4. This ionization of acids has been thoroughly studied by Richards, and later by Kastle. It leads us into the interesting field of the relation of taste to the acidity of acids, a subject that has been investigated by your speaker, from several different stand-points, several years ago. In regard to acid. muriaticum the molecular conductivity increases to one-thousandth normal, then it becomes constant. The molecular conductivity of acetic acid increases with the dilution, as far as the dilution can be carried by the conductivity method. Many organic acids and bases are only weakly dissociated at ordinary dilution; acetic acid, not at 10,000.

"The dilution at which complete dissociation takes place, lies far beyond the possibility of applying the conductivity method directly." (Jones).

Sixth. Neutral salts are the most completely dissociated, and hence could be given in more concentrated solutions to produce the same effect. Again, the authorities state that "Solutions of very difficultly soluble substances may be regarded as completely ionized." This is of the greatest importance, as it will clear up a point that has been often misunderstood. How, say some, can any effects be obtained from a remedy that is insoluble, like Silica, or Sulphur, or Aurum? It is conceded that solubility is only comparative; some substances are more soluble than others, none are theoretically absolutely insoluble. All elements, it is supposed, are found in the water of the ocean; in fact, a company has recently been formed to extract gold from sea water. These elements exist there, even though it would seem that one would precipitate the other completely. Although some substances are considered so insoluble by the chemist, we may suppose that there must be a slight solution, and in this extremely dilute solution there are no undissociated particles—*i.e.*, all the particles are ionized completely. These ions are in a condition to be absorbed and act on the system directly.

Seventh. I have spoken of electrolytes as those substances that would conduct the electric current, and as the ones that would be dissociated into active ions. How about the vast number of remedies that are not bases, nor acids, nor salts; that are simply extracts of drugs? In very many cases we do know that these drugs contain salts; in many others we do not know that there are salts, but we infer that there must be. In Opium, for instance, the Morphine exists as Meconate of morphia; in Nux vomica the Strychnine is present as a salt of Igasuric acid; in Aconitum we have the alkaloid united with Aconitic acid, and numerous other cases might be cited. There seems to be no reason to suppose that similar salts are not present in all the drugs that contain alkaloids. When we have these organic salts there is slight dissociation, enough, probably, so that in dilute solutions we should get the effect of the active ions. Some experiments made in the laboratory of the University of Kansas, with the help of my associate, Dr. Franklin, seem to indicate that there is a state of partial dissociation in some common drugs. We experimented with the mother tincture of Nux vomica and the mother tincture of Bryonia. In the case of the Nux vomica we found a resistance of 318.8, and in the Bryonia a resistance of 202.4. These figures are only relative, yet they show that these mother tinctures do conduct the current, and consequently they are partially dissociated. Now, we cannot tell what molecules are decomposed in the case of a tincture, as the substances present are so numerous, and the possible decompositions are also very numerous. The case is entirely different from that of a simple salt, as Kali bichromicum for instance. Tannic acid is a very weak organic acid that is liable to be present in very many vegetable infusions, and this, no doubt, plays an important part in aiding the dissociation.

Eighth. Another reason why we should infer that the action of dilute solutions would be different from that of the molecules is, that the electrical condition is different in the two cases. We may regard the molecules as having a neutralized charge, while the ions are partly positive and partly negative. Who shall say that the system is not so constituted that it can take care of and receive an impulse from the ions, since their electric condition is entirely dissimilar to that of the molecules, which it cannot receive from the latter?

Ninth. It should be distinctly noted that the statement is not made that there are more ions in a dilute solution, but that the proportion of ions to undissociated molecules is greater in the dilute solution. From this it would follow that, as the condition of complete ionization was gradually reached, it might be possible that the system would be more susceptible to the dissociated particles than to these same particles when mixed with a lot of molecules that acted in a different way. The effect of the molecules would be probably different when the remedy was presented in a concentrated condition, and this difference would be on account of the dissociation.

Tenth. The nature of the solvent should be more carefully considered, if the above theory is true. Water is the best solvent, and in this,

more than in any common solvent ionization, takes place. If, then, we wish to get the action of a dilute solution at as small a degree of dilution as possible, water should enter into the diluting material. Water itself is ionized very slightly into H and HO, but this can be neglected. Alcohol is not a solvent in which ionization takes place readily, but it is a pure substance to use as a diluent, and, if it contains some water, as it certainly must ordinarily, no doubt it gives an opportunity for sufficient ionization. Some experiments on the "Dissociation of substances in a mixture of water and alcohol," have been recently reported in the *Zeitschrift für Physikalische Chemie,* which seem to indicate that the replacement of water by alcohol has no effect on the degree of dissociation. The suggestion is therefore made, that dilutions might profitably be studied from the stand-point of dissociation in connection with methods of proving. I hope in some way to continue the investigation on the dissociation of mother tinctures and of the dilutions, though I recognize the difficulty of getting absolute results when we have to deal with vegetable extracts, whose composition is so little understood. Relative results, however, I believe, will be of value to the profession.

Finally, this application of the modern theory of solution seems eminently simple and practical. Taking this as a working basis it may be possible for some one to still further develop it, or, at least, deduce facts that substantiate it more thoroughly, or substitute some better theory in its place. We get below the mass action of a medicine, if we may borrow the term from the chemists, down to the action that takes place inside the molecule, namely to the action of the ions themselves. Just why these particles, with their peculiar electrical conditions, should act on the system therapeutically, in such a way that like cures like, we may not be able to conceive, but we can understand that in this condition, more than in any other, there must be a state of energy, such as is most favorable to absorption and to subsequent therapeutic action.

Discussion.

Charles Gatchell, M.D., Chicago, Ill.: This paper appeals to me as being a most remarkable one in its originality, and in the very plausible and convincing theory that it sets forth regarding the mode of action of drugs. Notwithstanding it is so lucid, still, it is a presumptuous act on my part to attempt discussion.

The subject-matter seems to harmonize with so many facts already established, that it must contain the germ of truth, if, indeed, it is not all the truth. I like Professor Bailey's opening suggestion, that imagination is the chief inspiration of science, even as it is of poetry and of fiction. It is told of the poet Goethe that he was once walking in a deserted churchyard with a friend, when he picked up an old skull and held it in his hand. "Do you know what this reminds me of?" said he. "It seems to me like an expansion of the uppermost vertebræ, a blos-

som of the spinal column." This poetic suggestion, so beautifully expressed, has come to be an accepted fact of science, for anatomists now teach that the occipital, the sphenoid, the frontal, and parietal bones are but expanded vertebræ, to enclose the cerebral mass. And so, Professor Bailey's theory seems to open the way to the true explanation of the action of drugs on the body. It also throws much light on the action of the high potencies. According to this theory, a high potency consists of a solvent containing dissociated molecules, or ions. What we call a "low potency" will contain undissociated particles, and also a certain proportion of ions. The action of the two preparations must necessarily be different in degree, if not in kind. So, also, this theory throws much light on the primary and secondary action of medicines. It is easy to understand that a drug made up of undissociated particles must have an action on the system quite in contrast to the action of a dilution of that drug, containing nothing but ions. Thus, crude Opium has a depressing action; an attenuated preparation of the drug has a stimulant action. On the theory of the action of the ions this double effect becomes clear. According to this theory, also, we can understand why some drugs act in attenuation, while others do not. This is determined by their different degrees of solubility. Now, for the first time, are we able to explain why it is that common salt, which we use on the table, has no medicinal effect, while Natrum muriaticum in attenuation is an active therapeutic agent.

Professor Bailey's paper is so exhaustive that it is difficult to make applications that he has not already anticipated, but it opens an inviting field of speculation. With this in mind I would ask, In what manner do drugs act when introduced into the system? This theory, I think, makes the answer clear. I think it is easy to conceive that the ions in the medicine act directly upon the ions of the elements of the body as they exist in the nuclei of the cells. Drugs cannot act upon the formed matter of the tissues, any more than they can upon so much parchment. The cell-nuclei are richest in water. I will venture to say that the nuclei of the cells contain ninety-eight per cent. water. Now, in these nuclei, the elements of the body are held in dilute solution. Consequently, the nuclei contain ions. When a medicine is introduced into the system, the ions of the medicine act directly upon the ions of the nuclei of the cells. Such action modifies the growth and nutrition of the cell, thus endowing it with resisting power, and this constitutes what we call the "cure of disease."

This is as far as I will venture to go at the present time in this very tempting field. I will conclude my remarks by expressing my personal obligation to Professor Bailey for what I believe to be the most important contribution that has been made to the scientific literature of Homœopathy since Hahnemann's day.

ELDRIDGE C. PRICE, M.D., Baltimore, Md.: As Dr. Gatchell has just said, this is a profound subject Professor Bailey has opened. It is impossible to discuss it to any extent in the little time I have had to

skim through the paper. There are a few ideas which have presented themselves to me in going over the subject-matter, however, some of which have been touched upon by Dr. Gatchell. In my mind this discovery is one of the best proofs we have of the greatness of Hahnemann, of his genius. He was working in this same line at a time when he could not call to his aid any of the modern instruments of science, and yet he was as well convinced of the efficiency of diluted drug substance, as if he had worked with Professor Bailey, when he secured his proofs of the great significance of drug dilutions.

At what point of drug dilution (and succession) is complete dissociation reached—what potency? We are told that some substances are almost insoluble. It is this almost that concerns the Homœopath. "Shadow is real, substances is unreal;" so it would seem that this is exemplified in drugs and their dilutions. It is not the crude drug that acts characteristically, but that into which the drug may be broken, its infinitesmal self, its shadow; not something in the drug, a dynamis, a soul, but the drug itself dissociated, ionized.

May not disease be due to an electrical disturbance, a disturbance of the electrical equilibrium of the organism, and may not the drug ions have the power of restoring this equilibrium by being appropriated by the ions of the organism, of the individual cells of the organism, as Dr. Gatchell suggested; the ions of each diluted and dissociated drug molecule possessing an individual and peculiarly modified electrical character of their own. The tests of physics cannot decide this point as yet; but may this not be the secret of why drug dilutions cure a diseased organism? Who knows?

PROFESSOR BAILEY: There are several points which have been brought up that I am sorry I am not able to answer. In regard to the condition of ionization, as affecting potency, I think this is a very important point, and one that, it seems to me, should be studied more thoroughly, as in the case of some drugs they should be largely diluted, and others only slightly diluted. Of course, this matter of dilution you have thoroughly studied. It is more difficult when we consider a drug that is an extract of a plant, as the relative conductivity only can be obtained.

A question was asked me in regard to the final limitation. Is it possible to so far dilute a substance that by-and-by we get only 4, 3, 2, 1 and no ions? When we consider molecules of matter we do not attempt to number them. Practically it does not seem possible. Theoretically, it is, of course, possible. Efforts have been made to find the size of molecules, and we know their size within certain limits.

I will say that if I have thrown any light upon the question of dilution and solution it has afforded a great deal of pleasure to me, for it is a subject that has always attracted me, and hence I have been led to study it in the light of recent investigations.

T. C. Duncan, M.D.: I take pleasure in moving a vote of thanks to Professor Bailey for this interesting paper he has given us this evening. Seconded. Carried.

Home Treatment of the Insane.

By William Morris Butler, A.M., M.D., Brooklyn, New York City.

The home treatment of the insane embraces all treatment outside of a regular institution, public or private, chartered for the treatment of the insane.

The arguments for or against the home treatment thus far advanced have usually been largely discounted by the public from the ignorance of its advocates regarding the actual inside workings of institutions, and the prejudice of its detractors caused by their financial interest in the institutions which they have championed. Before entering upon the discussion of this question we desire to state that having been for nine years connected as physician with the New York State Homœopathic Hospital at Middletown, one of the best and most successful institutions for the insane in the world, and since then spent fifteen years as a specialist of mental and nervous diseases, in private practice, during which time we have had continually a greater or less number of insane under the home treatment, we can fairly claim to have a thorough knowledge of the subject in all its bearings. While daily engaged in testing the home treatment we hold at the same time the position of president of the board of stockholders and consulting physician to a private home for the insane, and therefore feel that we have a right to claim an honest judicial weight for the opinions advanced upon this subject. In our discussion we shall give first a brief description of our plan of treatment, showing the advantages and disadvantages which it offers, leaving to our hearers the decision as to its merits in comparison with ordinary institutional treatment. During the past fifteen years we have had, under our care, every form of mental aberrations, and, thus far, have met with no case that could not be subjected to this form of treatment. The following hints will briefly outline the plan of treatment thus far successfully pursued.

If the environment is favorable to recovery the afflicted one is allowed to remain in his own family. This is not, however, always practicable, as the temperament of other members of the family may cause an exacerbation of the ailment in the patient himself, or render them liable to a similar attack, if constantly subjected to his influence. Also, as in other diseases, a change of scene and association not infrequently breaks up a painful train of thought, thereby unconsciously giving the patient a start in the right direction.

In the latter case, we secure suitable accommodations for the patient in a private family, in which are not wanting education, Christian refinement, tact, and plain common sense.

Next is secured an efficient and reliable nurse, or two, if the case requires it (not members of the family).

The room selected for the sufferer must be large, well ventilated, accessible to the morning sun, and as far as possible removed from household noise. The windows should be guarded (if necessary), and the doors securely fastened. All sharp instruments, such as razors, knives, scissors, etc., should, of course, be removed. Constant watchfulness is required that the patient secures no cord, bandage, or article of clothing by which strangulation might be accomplished, and that all dangerous drugs, or poisonous substances, common for household purposes, like carbolic, or oxalic acids, etc., be kept under lock and key.

Kindness, faithfulness, watchfulness, sympathy, and tact are indispensable in every case. Beyond these mere generalities the details of treatment must necessarily vary according to the nature of the individual case, his temperament, and liability to injure himself or others.

In acute cases, like acute mania, acute delirious mania, or puerperal mania, in fact, in any case where the physical powers are much exhausted, the patient must be kept continually in bed, in a recumbent position, by mechanical means, if necessary. During this time a liberal amount of nourishment is given in the form of milk and beef-tea, or some of the beef extracts, cereals, and fruit. In this manner sleep is most easily induced, and the waning strength is conserved until the crisis is passed. The high temperature, rapid pulse, restlessness, and maniacal fury may give the patient a semblance of strength. The appearance, however, is deceptive, and unless the greatest care is observed this waste of nervous force will result in death by nervous exhaustion, or what is far worse, complete dementia.

During the continuance of rest treatment, care must be unceasing that patient and bedding are kept scrupulously clean, the patient being given a bath of alcohol and water night and morning, or at least once a day. Frequent vigorous rubbing of the entire surface of the body and general massage will also prove useful adjuvants in keeping up an equable circulation and exercising the muscular system. Great care must also be taken in the ventilation and disinfection of the room.

During the convalescence of acute, and in all chronic cases in which the physical strength will permit, every suitable outside aid should be adopted to direct the sufferer's mind from its morbid channels of thought. Agreeable companions, pleasant surroundings, regular exercise in the open air, and any quiet amusement or occupation which will divert, without taxing the mind, should be provided.

In the medical treatment the most careful study and examination of all the physical symptoms should be made. All causes of reflex irritation, whether existing in the uterus, rectum, prepuce, or clitoris, should be removed. Then the most zealous care must be exercised in the selection of remedies.

The patient must be regarded simply as a sick man or woman, demanding, in conjunction with the closest attention and highest skill of his medical adviser, the best and most vigilant nursing.

Having thus briefly and cursorily outlined this form of treatment, let us proceed to consider a few of its advantages.

First, the public commitment of the patient as a lunatic is avoided. This commitment, according to the law of New York State, is exceedingly cumbersome, requiring an examination by two qualified registered examiners in lunacy, a petition to the judge by some near relative or qualified authority, a personal service upon the patient, the signature of the judge, and a recording of the commitment; or this private commitment, at the option of the judge may be made public, and the alleged lunatic be summoned before a jury, and all the facts of his sickness be brought into the light before the judge affixes his signature to the commitment, which declares to the unfortunate invalid, thou art no longer a free man, but a lunatic deprived by law, during the term of thy illness, of all thy rights of citizenship. The stigma which this temporary act of legal disfranchisement and a subsequent confinement as a prisoner in an asylum places upon a man, will rest upon him for the remainder of his life. Let him recover ever so fully, his actions never cease to be severely scrutinized and regarded with distrust. When treated as a private patient, this initial act of violence is avoided. No one need know the nature of the malady; all unkind curiosity and publicity is avoided, and no more injury is inflicted upon the future of a patient than had his illness been an attack of delirium in typhoid fever.

He remains a citizen. No jury deprives him of property and accountability when attacked, or restores the same to him when cured; when he resumes his place in the world no evil genii in the form of public distrust is looking askance at him, and whispering to his neighbors, "Lookout for him he has been in a madhouse."

Under the home treatment for the insane, furthermore, the patient receives individual care, and is freed from any possibility of abuse. With but one patient to attend, and continually exposed to the oversight of the family, the friends, and the physician, the nurse has no opportunity, if so inclined, to give the patient other than the kindest care, the most devoted nursing. The food can also be prepared individually (a natural impossibility in a large institution), and being more temptingly served is more in accord with the needs of a sick person. In the severest forms of insanity, acute delirious mania, puerperal mania, and melancholia with stupor, where the physical powers are tried to the utmost and the fever runs to almost incredible heights, the chance of recovery is greatly enhanced by avoiding the necessity of removal from home and a railway journey, which must still further weaken the patient and help to exhaust what little strength he may have. No physician would advise a long railway journey for a severe case of typhoid in the worse stage of the disease, yet the temperature and pulse of a patient with acute delirious mania, or melancholia with stupor, is usually much higher than that of any typhoid case. It is no wonder that the records of our hospitals for the insane show such enormous death-rates in these cases. When the cases arrive at the hospital

their vital powers are completely exhausted, and they are beyond the skill of any physician. Let these cases be properly treated at home and much of this danger is avoided, and their prospects of recovery greatly enhanced. These are the cases which usually die or are entirely restored to reason, hence their proper treatment is of the highest importance.

Another advantage is the lessening of anxiety to relatives and friends. There is no vantage ground for the imagination. The family know all. With the patient in his own home where the friends are cognizant of every means employed for restoration, as well as of changes occurring in the course of the disease, that indescribable burden of doubt and suspicion is lifted.

Another advantage in home treatment is the freedom from the bad effects of association with insane companions. Imagine the sensations of a delicately reared young girl, accustomed to the refinement and culture of a Christian home, listening to the strings of oaths and revolting obscenities, constantly poured forth by many of the insane. Can you believe that the society of companions filled with every form of mental delusion is conducive to a speedy return to the reasonable modes of thought and action?

The effect of the insane upon one another is recognized by every experienced asylum nurse, who justly dreads the entrance of a patient who has been the rounds of many institutions. He is sure to bring with him the tricks and cunning which he has seen tried in each.

Another advantage is the lessening of danger of a relapse into melancholia when the patient is issuing from a state of excitement, and first realizes his condition and surroundings. Often have we sorrowfully watched patients who, from a high degree of excitement, existing at the time of admission to the asylum, realized nothing of their situation, when recovered sufficiently to be conscious of their surroundings drop into the profoundest melancholia, from which nothing seemed able to rouse them.

In a private house, restoration from insanity is like the convalescence of any other illness. In a private family also exists for the patient every form of diversion open to anyone. Graduated to his stage of convalescence, lectures, concerts, operas, theatres can all be utilized as useful aids in the process of cure.

Hospitals for the insane, like other general hospitals, have a noble and legitimate work to perform for the poor and unfortunate, and, in order that their usefulness be not curtailed from lack of sufficient means, it is eminently fitting that they receive ample recognition and support from the State. For those, however, who, by business thrift and ability or by the rights of inheritance, have acquired a liberal amount of this world's goods, the home treatment offers a surer and more humane method of cure for the disordered mind, and one that leaves no black trail behind.

Electrical Osmosis in the Treatment of Neuralgia.

By A. W. Bailey, M.D., Atlantic City, N. J.

The opportunities that are presented to the general practitioner, as well as to the specialist, for successful and even brilliant results through electrical osmosis, are many; still this department of electrical therapeutics has been but little written or commented upon. This paper is presented with the hope of provoking some discussion upon the subject, especially in the palliative treatment of neuralgia.

By electrical osmosis is understood the introduction or passage of fluids or crystaloids in solution through a tissue or porous septum, by the agency of a constant electrical current. This process may be either physical or electrolytical, or perhaps both, depending upon the character of the substance to be introduced, and is either cataphoritic or anaphoritic in its operation.

It is not my purpose to discuss this subject so much from a physical as from a therapeutical stand-point, though a knowledge of the former is absolutely necessary for a correct application of the latter, for some remedies have under test disappointed us in their supposed action under electrical osmotic influence. A rule that can be generally relied upon is that the base of a salt will be introduced into the tissues by the anode, while the cathode must be employed for the radical. But some substances require testing. Cataphoresis of Iodine has for several years been recommended and used, but experiment proves that Iodine cannot be driven into the tissues by the anode. Take a glass tube and divide it into three compartments by two plaster plugs, filling the middle compartment with a tincture of Iodine, and the two end compartments with a starch solution. Into the end compartments introduce the electrodes. In a few minutes a discoloration will be noticed in the compartment in which the anode is placed, while the starch solution surrounding the cathode will remain perfectly clear. This shows conclusively that the Iodine cannot be diffused by the anode, but is driven against the current to the anode. It will also show the process to be a physical one, for the discoloration begins next to the plaster plug, and continues through the starch to the anode. Iodide of potassium is also thus caused to pass through the septum, for when it is employed the discoloration appears at the point of the anode, showing that Potassium iodide passes physically through the septum, and is decomposed upon reaching the anode, and the Iodine is set free. I have tested this in many ways, but always with the same result. Potassium permanganate passes from the cathode to the anode, while common salt will go from the anode to the cathode.

The therapeutical uses of electrical osmosis are numerous, but I shall simply call attention to some cases of neuralgia in which I have used it, employing a ten per cent. solution of Cocaine, with and without Aconite.

CASE.—A young lady, aged eighteen, subject to frequent attacks of left-sided trigeminal neuralgia, which have been tormenting her for several years, the attacks coming every two or three days, and lasting from six to twelve hours. Medical treatment by both schools had given her no relief, neither had she received any benefit from electricity. Morphine had been used to control the pain, and she had taken it almost daily for eighteen months, and was rapidly forming the Morphine habit. She dreaded forming this habit, and pledged me to take no more provided I controlled the pain. Electric osmosis of Cocaine and Aconite was practical when an attack threatened, and the results were most gratifying, as the pain was rapidly controlled, the relief being more lasting than from Morphia. Curative results were not expected, I was only looking for a substitute for Morphia, and found it. The attacks are now not quite so frequent, and she is entirely rid of the bad effects of the drug she was depending upon

The treatment in her case was as follows: Five drops of a ten per cent. solution of Cocaine, in which was placed a half drop of the tincture of Aconite, was dropped upon a piece of filter paper a half inch in diameter. This was placed over the exit of the superior maxillary branch, and the anode applied, the cathode being held in the left hand. A current of five milliampères was used for three minutes, increased to seven, then to ten milliampères, two minutes each, then reduced to five milliampères, and continued for five minutes; pain by that time being entirely relieved, and she enabled to go about as usual.

This one case is sufficient to illustrate my point, that in this method of treatment we have a substitute for Morphia which is quick in its action, and harmless in its results. I have used it with success in sciatica, in the sharp pain of beginning locomotor ataxia, intercostal neuralgia, toothache, earache, and once in neuralgia of the spermatic nerve.

To the gynecologist, the rectal or ear, nose and throat specialist, electric osmosis opens even a wider and more fertile field for investigation and application, and is a department in electro-therapeutics that should not be neglected by the general practitioner who uses electricity in any of its forms.

Structural Changes in the Brain.

By E. R. McIntyre, B.S., M.D., Chicago, Ill.

In the present paper I have included new growths because it is exceedingly difficult to conceive of a new growth without structural change, notwithstanding good authorities make a distinction between them. I have chosen to make my report largely clinical, feeling that long papers on abstruse theories, while they may be very interesting, are, to say the least, not very profitable as a rule.

The brain, as the highest centre of animal life, presents to us a field at once obscure, interesting, and instructive. Its structure is complex, many of its functions are obscure, and its relations to other organs are so intimate and important as to render its study of the greatest interest.

In studying the pathology of the brain we must rely largely on anatomy and physiology to guide us, because of the variations in symptomatology of different structural changes, or those of the same character in different locations.

Correct diagnosis can only be made from a knowledge of the anatomy and physiology of the brain, and early diagnosis is important in that the sole hope of the patient in many cases depends on the proper treatment applied early. This is not less true because the early treatment is usually under the direction of the family physician, the specialist being consulted later. This, in part, accounts for the frequent failures by the specialist, which should not be charged to him, but to the failure to appreciate the gravity of the case before he is consulted.

Case I.—Early in 1894 I was called in consultation to see a man aged about forty, American, occupation, merchant; family history, good; personal history: Several months before I saw him he had become forgetful, first of unimportant matters, later of business transactions, and finally of time. He could not keep track of day or date, and had to be told when it was time to eat or sleep. He denied ever having had syphilis, though presenting several characteristic inguinal scars, complained of sharp pains in left side of head, and would put his hand to left side of forehead and cry out "Oh, my head!" When I saw him there was some tendency of feet to turn in, and at times slight convulsive symptoms, but no true convulsions or paralysis of any part of the body. Neither was there trouble with the special senses. Cerebral tumor had been the diagnosis.

I concluded that the anterior cerebral arteries had been gradually occluded, probably by thrombi. On seeing him again I noticed that other locations were involved and informed the doctor the dis-

ease had extended. The man lived but a few weeks after this visit, dying unconscious.

Post-mortem examination, fourteen hours after death, revealed absence of meningitis or thrombi; but the anterior lobes and almost entire base of brain were in an advanced stage of white softening. The pons and medulla dropped off. The anterior cerebral arteries were sclerosed and occluded, the smaller vessels at base of brain were in the same condition, only in a less advanced stage. The left optic thalamus was about double the normal size, covered by small spots of extravasated blood. This latter condition indicated numerous ruptures of small vessels, which probably caused the frequent slight convulsive symptoms, and tendency to contracture of muscles of feet.

The points of interest in this case were the mistaken diagnosis, which was adhered to in a published report (?), of the case after the post-mortem examination had revealed its erroneous character. The symptoms that led me to a diagnosis were the gradual onset, the evidence of syphilis, the failure of memory, irritability, and physical weakness without paralysis, and at times a tendency to "clipping" in speech.

CASE II.—M. C., male, American, aged forty-one, by occupation a sign writer. I was called to see him about 2 A.M, April 26, 1896. Found him in profound coma, with stertorous breathing, which led me to think of opium poisoning; but without the contracted pupils. From his wife I learned that he had long been addicted to alcoholic drink; that he had worked the day before, coming home in the evening at the usual hour, ate no supper and retired at 7 o'clock, saying he did not feel well. He had never complained of head symptoms, and did not at this time. His wife believing him intoxicated did not speak pleasantly to him. He soon fell asleep, and after midnight she noticed the heavy breathing and attempted to wake him. Failing she became alarmed and sent for me. There was no history of syphilis or other venereal disease that I could get. Neither was there tubercular or other hereditary taint.

He never regained consciousness, and died about 5 A.M., no stimulant having the least effect on him. Post-mortem examination at 6 P.M. There was no adhesion or other signs of meningitis. The brain was removed without difficulty. On removing the membranes the superior surface appeared normal, except vessels enlarged, but on turning it over we found almost the entire base in an advanced stage of softening. There were no new growths, neither were the vessels occluded at any point, but their walls were sclerosed. The basal ganglia were not seriously affected, neither were the cranial nerves. The medulla was in a less advanced stage of softening than neighboring parts. The nuclei of the cranial nerves probably being last involved, explained his death so soon after the first symptom (coma), which pointed to disturbance in the basal ganglia.

The points of interest in this case are the sudden onset of symptoms, and rapidly fatal termination in connection with a history of prolonged alcoholism.

CASE III.—Mary B., aged thirteen; admitted to the National Emergency Hospital, December 4, 1897; mother living, an habitual drunkard; family history negative; personal history: Spent some time in a convent where, she says, she was frequently struck on the head with a cane. She has never menstruated, but was always well until January, 1897, when she was attacked with severe vomiting, projectile in character, and without nausea. This occurred at first each alternate day. Soon a vague pain appeared in the head, not local, but a "dull headache." The vomiting gradually increased in frequency, the headache increasing as gradually. There was no fever at any time, neither was there any disturbance of general or special sensation until October, 1897, when she noticed the sight was failing. There never was paralysis or anæsthesia. The mind was unusually bright for a child of her age. With the failure of sight the pains increased and became more paroxysmal, being excessive at times with intervals of comparative ease, sometimes referred to one point, and then to another, but never remaining long in one place. At no time was it sharp or aggravated by noise or jars. She was very anæmic when entering the hospital. The impairment of sight had increased until she could not distinguish objects, but could see light. The vomiting was almost constant. "Choked disk" marked. By diet and the administration of Arsenic iodide 6x the vomiting was much improved. Before I took charge of the case the sphincters had been stretched for the cure of a supposed cerebral meningitis, which operation greatly increased her suffering, by adding the pain in her rectum. Percussion over head was negative. The urine was normal, except an excess of phosphates; but at times local heat over the bladder was necessary to assist her to pass urine.

In January, 1898, one year after first attack, she ceased to see light, and no reaction of widely dilated pupils could be elicited by a bright light. There was no paralysis of any of the ocular muscles, or any of the cranial nerves except the optic. There was lateral nystagmus. She gradually grew weaker, and the exacerbations of pain increased until she would be delirious at times. Each paroxysm left her weaker than the former.

March 23, 1898.—Pain seems to be localized in front and top of head. Percussion negative. About this time she began to sleep so profoundly during the day that she could not be roused; nights wakeful. Her general strength failed until she could not stand or walk. The vomiting continued at irregular intervals, but less frequent. Waking-hours gradually shortened. About the middle of April I noticed the eyes were becoming more prominent, the right more so than the left. The interocular tension increased in both, but more in the right. Pain almost constant in head, referred to right frontal region. Vomiting at longer intervals; diet very carefully selected. ℞ Zinc pic. 6x. Early in May there began to be signs of improvement. She became able to walk with help. May 26th and 27th, epistaxis in mornings. This occurred several times, with continued improvement. By June 10th she could walk about the corridors, and was up and dressed most of the days. She is rarely, if ever, clear of frontal pain.

At this writing, June 15th, she is still able to be "up and about," so I have not been able to confirm my diagnosis of intra-cranial neoplasm, probably gliomatous in nature, located in the centrum ovale, so as to gradually impinge on the optic chiasm from above. But I am still convinced that this is the condition. The reasons for so locating the lesion are lack of symptoms of other cranial nerves, which would hardly all escape were it located in the base of the brain or basilar meninges, unless it was immediately beneath the optic, where it would probably have affected that nerve much earlier, while it was too small to press on other nerves. It could not be in the motor area, since there is no motor paralysis. That it is pressing on the optic chiasm is proven by the simultaneous loss of sight in both eyes, a condition impossible from pressure in any other part, and scarcely probable if affecting the sight-centres in the occipital lobes or corpora quadrigemina. Besides, if in this region, we would have other symptoms that are absent in this case.

The points of interest in this case are the history of traumatism to head, the extreme low condition to which she progressed, followed by what I believe to be but temporary, though marked improvement, the absence of either motor or sensory paralysis, except the single cranial nerve, and the seeming relief from repeated slight attacks of epistaxis. The mind has never been seriously impaired, except at times she was delirious from pain, and would forget some important occurrences like vomiting, etc.

CASE IV.—Mrs. M., aged sixty-five, American, married, mother of several children, youngest seventeen years old; admitted to the National Emergency Hospital, March 23, 1898, from a neighboring State. Family history could not be obtained. Since birth of last child, when she was forty-eight years old, she has suffered from some form of uterine trouble, but was able to do hard work most of the time. In 1892 a letter written to her son shows mental incoördination; sentences being incomplete, some words omitted, others repeated. In 1893 she was in a railroad wreck about 2 A.M. At 10 A.M. she was found wandering the streets in a dazed condition, unable to give any account of herself. From this time on she became more forgetful, irritable, etc.; could not remember recent events, but early experiences were retained. At times forgot her children, but the small grandchildren were remembered. These conditions increased, as did physical weakness. Until six months before her admission to the hospital the uterus passed through the vulva, forming a complete procidentia. The organ was very irritable, causing much suffering, for which Professor Skiles made a hysterectomy, March 27, 1898. She recovered from the operation without incident. When I first saw her she was extremely profane, with constant muttering and monotonous repetitions, clipping syllables and words, with occasionally a word or two that seemed rational. After a few weeks she became less noisy and profane, but showed no signs of intellectual health. Urine passed involuntarily, and contained albumin; in fact, she had no consciousness of her environments.

In this condition she was discharged at request of friends on April 27, 1898.

Soon after the railroad accident the friends were told that she suffered from senile dementia; but with this I am not prepared to agree, 1, because the mental failure began at rather too early a period in life (fifty-nine); 2, because she was not really demented until long after that time, and not entirely so when she left the hospital. But that she is drifting toward dementia can scarcely be questioned.

The diagnosis of a case with such a history is exceedingly difficult, and never absolutely certain. But the symptoms and history, taken in connection with the age of the patient, point to one of two conditions, cerebral atrophy, or softening. The case lacks the tremor and loss of motor power of senile atrophy. Furthermore, there is not the general wasting of the body from trophic changes of cerebral atrophy. The impaired memory, unnatural peevishness, and irritability, imperfect control of emotions, despondency, physical weakness, monotonous habit of speech, etc., would indicate possible cerebral softening. This was my diagnosis. That the procidentia was a cause of her insanity is disproved by the fact that she was insane long before this occurred. It seems more probable that it was one of the results of general weakness of all of the organs. That it was a constant source of irritation that could only be removed by hysterectomy cannot be doubted, since by no means could the uterus be made to maintain its normal position.

CASE V.—Male, German, aged sixty-five, laborer, came to my clinic in 1895. Family history negative; personal history unsatisfactory. Symptoms: spasmodic tremor, worse when attempting to control it, or when excited, or attempting to make certain motions (intention tremor). Walked stooped, with knees bent and hands as if ready for use in falling; stumbled over the least irregularity in the walk, could not turn readily, and trotted rather than walked. He was treated several months, and lost sight of without improvement. Diagnosis: Multiple cerebral sclerosis. I am aware that many may not agree with this, because authorities differ. Some authorities give this class of cases the name paralysis agitans, and tell us we must be careful to distinguish this from multiple sclerosis, and then the same authors give almost identical symptoms under this disease. They tell us that in paralysis agitans there is a proliferation of connective tissue in the brain, and in sclerosis there are disseminated patches of connective tissue, not throughout the brain. One author says that "Sclerosis of Ammon's horn, atrophy of anterior convolutions, cerebral peduncles, and pyramidal tracts; atrophy of the corpus striatum; sclerosis of the cerebral peduncles and pons Varolii; atheroma of the vessels of the base of the brain; granular and pigmentary degeneration of nerve-cells, etc., are present in paralysis agitans.

Now, I submit that it is difficult to ascertain how there can be sclerosis without a proliferation of connective tissue, or how we are to be sure that the one is not a stage in the other. Another author says that "Our knowledge of these changes, is, however, so imperfect that we

are forced to consider this disease [paralysis agitans], as a purely functional one."

This author also tells us that multiple sclerosis seldom occurs except in the adult or the aged. Another says it develops in the early part of adult life. And so I might go on giving contradictory statements by different authors regarding these troubles, and identical conditions given by the same author under both. It would seem that they have been trying to fit like conditions to different names, or describe typical cases of which they say there are very few. Therefore, to me, multiple sclerosis of the authors is one stage, and paralysis agitans is another stage in the development of the same pathological condition. And I prefer the former name, because it defines the pathology.

REPORT

OF THE

SECTION IN OBSTETRICS.

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Sectional Address: Lingering Labor in the First Stage; Its Causes and Treatment.

BY L. L. DANFORTH, M.D., NEW YORK CITY.

Another year has passed away, and we are met together here in this obstetrical section of our National Society for the purpose of increasing our knowledge, enlarging our views, and broadening our conceptions of the dignity of our high calling by personal contact with our fellows; of giving and receiving from the great storehouse of personally ac-

quired experience that which will enable us to return to our chosen fields of work in the hope that we may attain to a higher standard of success than we have ever reached before.

I believe that this is the motive which has prompted each member of this Society as he has journeyed hither, and I trust that in no wise will he be disappointed in this endeavor. I think we are to be congratulated on being able to assemble here at a time, and in an age, when everything relating to our profession has reached a pinnacle of absorbing interest, and of the highest good to mankind; but it would be the height of folly to fold our hands and cease our efforts, for we have much yet to learn if we would keep abreast of this rapidly advancing age; an age in which the future scientific interest, practical extension, and proportionate beneficence of our science and art seem to be unlimited.

We are here, fellow-members, to discuss topics relating to the special department of midwifery. I hope to hold your interest for a brief period by referring to a topic which directly concerns the daily routine of professional life in promoting the comfort and welfare of our patients, and is, therefore, eminently worthy of your distinguished consideration.

I refer to "Lingering Labor in the First Stage; Its Causes and Treatment." I shall endeavor to be as brief as possible, even dogmatic, in discussing questions which to be fully studied would require infinitely more time than I have at my disposal. I can do little more than merely indicate some of the topics which naturally suggest themselves for consideration. Very likely these will not meet with general acceptance, but they will, at least, form a text for debate, and may possibly elicit a valuable expression of opinion from the learned physicians present who must have had a large practical experience in actual midwifery work. I shall classify the causes of lingering labor in the first stage as follows:

1st. A rigid and undilated cervix.

2d. Slight disproportion between the head of the child and pelvic inlet, whether due to actual contraction of the conjugate or to a relatively large size of the child's head.

3d. Malposition and malpresentation of the presenting part.

4th. Uterine inertia from inherent weakness of the womb.

In discussing the first division of the subject, viz., the rigid cervix, it may be stated, almost as an axiom, that there is, as a rule, no real obstacle to delivery in the state of the cervix itself. This part of the uterus will dilate readily enough provided the expulsion forces be properly acting; and in dealing with this condition our first object will be to ascertain, and if possible, to remove the cause which is interfering with the normal progress of the case. This can only be done by a careful examination of all the factors entering into the solution of the mechanical problem involved. I have stated that, as a rule, the cervix will dilate properly, provided the expulsive powers be acting efficiently. In making this broad statement I am conscious of the fact that some-

times non-dilatation is due to structural causes, such as malignant indurations, or cicatrices from former injuries, or operations; but these conditions are extremely rare. When they exist they are easily discovered, and the treatment is at once obvious. In the consideration of causes I refer especially to the difficulty frequently met with, arising from non-dilatation, caused by inertia, or by irregular and cramp-like pains; also premature rupture of the membranes, (or what is practically equivalent to premature rupture) scantiness of the liquor amnii with perhaps a thick, tough, inelastic sac; or, again, and not less important, non-dilatation from excessive sensibility (hyperæsthesia) of the dilating structures, a condition which is but the local expression of a generally hypersensitive state of the whole system. It is quite true that these conditions in themselves are not serious obstacles to the ultimate termination of the first stage of labor without the intervention of any means that our art can supply. But that they are serious in the sense that they often greatly prolong the first stage of labor, and add materially to the painfulness of the dilatation, no one with practical experience will deny. I cannot agree with the old dictum that protraction of the first stage is of no importance provided the membranes are unruptured, or that the suffering which attends the first stage is of little consequence. It was formerly stated by obstetric writers that labor is not to be considered as even tedious, unless more than twenty-four hours have elapsed, and furthermore, that no matter how long the delay, we are not justified in interfering unless we find symptoms of exhaustion resulting.

In Blundell's classical work (1842), we are told that "In lingering labors generally, unless there are symptoms of danger, the less you interfere the better, for a meddlesome midwifery is bad; and if the protraction of the delivery be the only inconvenience which the patient suffers, and there are no convulsions, no floodings, nor well-marked signs of collapse to excite alarm, it is scarcely necessary the accoucheur should interfere at all."

Such advice as this is very correct provided all the processes concerned in the physiological dilatation of the cervix are performed in a perfectly normal manner; *i.e.*, with each uterine contraction there is a bulging of the bag of waters, and a proportionate dilatation of the cervix, the entire act being performed with a moderate amount of pain, and each contraction being followed by a period of rest and repose.

Such a first stage, even though prolonged over a space of ten, or twelve, or fifteen hours, while fatiguing and more or less exhausting does not call for special treatment. But the question which it is desired should be brought out clearly is this; shall a first stage be allowed to drag on hour after hour when the physiological conditions concerned in the act are not being properly performed? Is the mere fact that the membranes are as yet unruptured, and presumably, therefore, no danger threatening the child, a sufficient reason why the accoucheur should stand idly by, with folded hands, doing nothing, hour after hour, until symptoms of mischief have actually arisen? Is not the mere wear and

tear of a labor lasting twenty-four hours or more, in itself a serious thing, and is it not merciful and wise to adopt such means as will tend to minimize the pain, shorten the duration of the first stage of labor, and thus conserve the strength of the patient that she may be the better prepared for the more arduous efforts of the second stage, as well as predisposed thereby to a more rapid and comfortable convalescence?

It is important to bear in mind the fact, that, although pain is the usual and necessary accompaniment of labor, and is in a certain sense an important physiological factor, it is in its essence pathological. Pain during labor depends mainly upon two conditions, first, the susceptibility of the patient, and second, the state of the expelling and resisting forces. If susceptibility is great and the expelling forces urgent, at the same time that the resistance is nearly equal to the expelling power, the dilatation of the cervix and the advance of the presenting part will not only be temporarily checked, but excruciating pain will become an added factor of the utmost gravity.

Through reflex influences, partial or complete inhibition of the nerves which send their motor impulses to the muscular fibres of the uterus results, and uterine activity is either greatly modified or ceases altogether.

Herein lies the justification of my remarks concerning the adoption of such mechanical and medicinal means as have for their object the shortening of the first stage of labor when unduly prolonged, and the mitigation of pain when this becomes severe and exhausting.

In speaking of the treatment of lingering labor, it is not my intention to discuss oxytocic drugs, or strictly homœopathic remedies for regulating pains.

It is a matter of common experience that homœopathic remedies, accurately administered, will increase weak pains, regulate spasmodic pains, and otherwise so harmonize the forces of nature that labor will progress in a natural manner. It is not my purpose to refer to this part of the subject, and so far as purely oxytocic drugs are concerned, they will be considered by another writer at this meeting.

The class of cases to which my comments especially apply are those in which nature is embarrassed by some physical obstacle, and hence ceases her efforts, partially or wholly, until the fault is rectified spontaneously, or by art.

Many cases of lingering and painful labor may be relieved by the application of a few common-sense rules to the management of the membranes.

Extremely painful labor is often observed when the head of the child is well engaged in the cavity of the true pelvis (as in primiparæ) when the labor begins, distending to the utmost the lower segment of the womb, putting all the tissues on the stretch until they are so thin and so tightly drawn over the head as to be scarcely distinguishable from the scalp of the child, the os itself being directed backward toward the hollow of the sacrum, and so high up as to be felt with difficulty.

In these cases the force of the uterine contractions is directed in a line anterior to the mouth of the womb, and is therefore spent in fruitless and painful efforts upon the thinned and sensitive anterior uterine wall. The head by its size and low position acts as a ball-valve, and prevents the formation of a proper and efficient bag of waters.

If the head be now pushed up in the intervals between pains, an opportunity will be afforded for the descent of the liquor amnii, and pressure on the sensitive cervix will, in a great measure, be removed; at the same time the finger should be placed in the os, and its position changed by drawing it forward, so that the direction of the uterine driving force, and the centre of the os will be in the same pelvic axis. You have thus created an efficient bag of waters, rendered effectual the driving force, and by so doing have transformed abnormal into normal conditions, all of which will facilitate and lessen pain.

A similar procedure so far as increasing the force of the contractions is concerned, will be useful when the sac has prematurely ruptured, and the head is low down, closing the canal between the uterus and vagina; the bulk of the water is prevented from escaping, and so by distending the womb prevents it from acting. If the head be raised between pains the waters will escape in part by their own gravity, and in part by the expulsive action of the womb.

The same principle of action will be equally effective in case the uterus is distended by a great quantity of water (as in hydramnion), or in over-distention from twin pregnancy. If the water is allowed to drain away, or a portion of that which the uterus contains, by a premature rupture of the sac, the progress of the first stage will be expedited and hours of pain avoided.

In an occasional case, the first step is prolonged and rendered needlessly painful, by a small amount of "fore waters," and a tough inelastic sac, or at least a sac which has never become thinned, because it has never been "put upon the stretch," so to speak, by the force of the uterine contractions. When this state exists great good will be accomplished by lifting up the head, allowing the waters to descend, thus creating a fuller sac; and, perhaps, at an opportune time rupturing the sac, if the cervix possesses a fair degree of dilatibility, though not yet fully dilated. Amongst mechanical processes used in the treatment of undilated os, manual dilatation with the finger, long held a prominent place, and at one time in the history of midwifery was the subject of much acrimonious discussion, having been recommended by Smellie, Burns, Gooch, and other prominent obstetricians in England, and as strongly denounced by others, particularly by Denman, who calls it "an abominable practice."

Whatever may be the adverse comments of some practitioners, I am convinced that it is a sound practical observation, and promotes dilatation to a remarkable degree, if the finger be swept around the inner circle of the os, and, at the same time, the os stretched to a moderate degree.

Whether this manœuvre acts by separating adhesions which retard

dilatation, or by stimulating the nerve-supply of the uterine muscles by irritation of those of the os, I am unable to say, though it would seem as if the latter theory were the more probable. When the head is low down in the pelvis, the os soft and relaxed and the membranes ruptured, it is good practice to push, as it were, the os over the head, since the progress of the case is thereby often expedited. It requires some judgment and practical experience as to the proper cases in which this expedient is to be used.

The procedure is capable of much abuse if rashly practised, and should be employed only by skilful and careful hands.

Pushing up the swollen anterior lip when impacted between the head and the pubes is also not only legitimate, but essential, to save injury to the os. The gentle pressure of the finger is obviously much less likely to be harmful than the long-continued bruising, to which the uterine structures would otherwise be subjected.

Now, as to the control of pain when this is a factor *per se* in the first stage of labor. All practical obstetricians are aware of the great and prolonged suffering which often attends the first stage, even when we do all we can by means of homœopathic remedies, and local means for its relief.

How often do we observe a case in which apparently all the conditions are favorable—good uterine contraction at regular intervals and a normal sac, developing surely, though slowly, as it performs its functions in dilating the cervix, and yet the pain which the patient suffers becomes almost intolerable and is proportionately exhausting.

Again, when the bag of waters ruptures prematurely, and the head of the child presses on the sensitive cervical tissues, how painful is the process, and how tedious as it drags on hour after hour.

Often the os will be found high up, so as to be reached with difficulty, slightly patulous and rigid, thus presenting a condition which almost surely forebodies a slow, tedious, and painful labor.

In such conditions, the imperative duty of the accoucheur is to relieve pain, relax the tissues, and lessen spasmodic uterine action, all of which are recognized causes of non-dilatation of the cervix. This may be done by the use of a remedy which is an analogue of chloroform, viz.; chloral, the use of which in this connection was first suggested by W. S. Playfair of London, in 1874, and has since been used very generally by physicians of the "old school," though very little, I believe, by homœopathic physicians. But why should it not be? Most of us, at the present time employ, and few decry, the use of chloroform in the second stage of labor, though all admit that it possesses certain disadvantages when given over-freely, since it distinctly retards labor by lessening uterine action, and thereby predisposes to uterine inertia. Chloral has no such disadvantages, and while not so anæsthetic as chloroform, it is distinctly hypnotic, and moreover does not in any way derange the natural processes of labor; it does not affect the motor nerves, nor impair the contraction of muscle, and, although it does not directly suspend the functions of the sensory nerves,

it relieves certain kinds of pain due to irregular or over-action of unstriped muscular fibres (Bartholow). Hence, its utility as a remedy for the relief of the so-called "nagging pains" of the first stage of labor.

Playfair says: "Since using chloral, I have practically never had any trouble from the rigid cervix which formerly used to give so much worry. Under the use of this agent the pains become longer, steadier, and more efficient; the patient falls into a somnolent condition, dozing quietly between the pains, which are not lessened or annulled, as is the case when chloroform is inhaled freely; and above all the wild state of excitement, which is so frequent in this class of labor, is calmed and soothed, to the infinite relief of patient and practitioners." Schroeder says: "Chloral has been given in tardy and exhausting labors. After an hour's sleep, on awakening, the labor was very rapidly terminated by powerful pains. We have also observed that by the use of chloral, in cases where the uterine action was very painful, without being efficacious, the labor assumed an instantaneously rapid course, although the intervals between the pains had considerably increased in duration."

Dr. Atkinson of Philadelphia says: "It would appear that even while chloral produces a calm, refreshing sleep it does not by any means entirely check the progress of labor when this act has commenced. For it is invariably found that dilatation has gone forward, and generally, so completely is this accomplished, that, on the patient awakening, a few quick pains will often complete the delivery. I regard the use of this remedy as producing results similar to those of an anæsthetic in surgery, and therefore similarly indicated. While it relieves to a marked degree the pains of travail, it measurably contributes to a safe and speedy convalescence." To accomplish these beneficent results it is not necessary to administer doses of any unsafe amount. Fifteen grains, repeated in twenty minutes, either by mouth or rectum, is generally sufficient to produce an effect lasting over several hours. Possibly a third dose may occasionally be required, but never more.

I would call your attention next to another question, the second in our classification, viz.: Delayed first stage from slight disproportion between the head of the child and the pelvic inlet, whether due to contraction of the conjugate, or to a relatively large size of the child's head.

The first stage of labor is often unduly prolonged by causes which are not apparent or even suspected at the beginning of labor. Among the most important of these is the one I have just presented. By what indications are we able to recognize such disproportion, and how are we to proceed when the exact nature of the difficulty is recognized? No greater problem confronts the obstetrician than the determination of this question, since upon its correct solution may depend the life of the child, and, perhaps, of the mother as well.

Pronounced pelvic deformity of a high degree at once arrests the attention of the obstetrician, and the appropriate procedure is apparent

without much difficulty. But not so when slight disproportion exists, since to the casual investigation all appears normal, and it is not until the labor has dragged on in its wearying course past the usual time for the first stage to be completed, that any abnormal condition is even suspected, the attendant up to this period having rested secure in the false belief, that so long as the head has not engaged, or the membranes not ruptured, no special harm can result from the unusual delay.

Whenever the head of the child does not engage so that the parietal protuberances are opposed to the symphysis and the promontory respectively; in other words, when the head is resting upon the pelvic brim, but not engaged in it, after the continuance of strong labor-pains for a period of three or four hours, I would urge that no more time be wasted in expectancy, but that an effort be made at once, to ascertain the cause of the delay. I have known cases where this state of things was allowed to drag on twenty-four hours and more, even until the waters had drained away, the patient herself had become utterly exhausted, and the life of the child jeopardized, if not actually lost, before any attempt was made to ascertain the nature of the difficulty. There is one indication, at least, whereby we may know whether the bag of waters is being influenced by the uterine contractions, and that is, by observing whether or not the cervix is subject to tension at the height of the "pain." Before the rupture of the membranes, the uterine contraction, at its acme, will cause the sac to bulge somewhat; but in spite of this the cervix often dilates slowly, or not at all, and remains about the same, hour after hour, thus showing that there is some impediment to proper uterine action, either of the nature of over-distention, malpresentation, or retention of the head above the brim, from relative disproportion. But premature rupture of the membranes oftener happens than delayed rupture under these circumstances, because the presenting part does not fill the os uteri, and shut off the "fore-waters" from the general intra-uterine pressure. In such a case after rupture of the membranes the presenting part does not come into the os uteri to dilate it, and it is, therefore, uninfluenced by the pressure, and is only very slowly and imperfectly influenced by the uterine contraction; the cervix, therefore, hangs down loosely and "fringe-like" below the presenting head. Having by these indications arrived at the conclusion that there is some reason why the head does not engage, and the first stage of labor come to its natural termination, the next duty is to ascertain the cause of the delay. This requires a careful internal examination to determine the exact relation of the head to the pelvic inlet, and involves also some observations on pelvimetry. I cannot refrain from saying a few words on the subject of pelvimetry; which, as a part of obstetrical study, has received far less attention than its merits deserve. The educated obstetrician of the future will be expected to make such observations, by means of his hand, and the pelvimeter, as will enable him to determine with sufficient accuracy for all practical purposes, the dimensions of the pelvic inlet, to say whether it is the conjugate alone, or all the diameters of

the brim, which are diminished, and approximately the degrees of the contraction, as well as the relation which the contained body—the child—bears to the passage, which it is by Nature intended to pass through.

I express the hope that obstetricians will pay more attention to this subject in the future, since by so doing, they will be able to decide upon the relative merits of the different operations which often come into intimate and perplexing competition with each other.

In delayed first stage, when an obstacle exists to the natural engagement of the head, two measures are open to us if it is decided that the natural forces are unequal to the task of delivery, viz., the forceps and version.

I will define the indications for each procedure when the head is at the superior strait.

First the Forceps.—As preliminary, it must be determined that the conjugate measures three inches or more, that the child is alive, and that uterine contractions are present. Then the position of the head must be accurately made out; if it is lying with its long diameter transverse, the anterior fontanelle as low down as the posterior, and as Litzmann pointed out as an induction from clinical experience, if the sagittal suture is nearer the promontory than the symphysis, and not less than three-quarters of an inch from the former, it is fair to infer that the head has so far engaged that forceps delivery will be comparatively easy.

Herman ("Difficult Labor") has also emphasized the fact, that when the sagittal suture is in the position described, it is good evidence that the head is entering the brim with the smallest possible diameter opposed to the conjugate. If forceps be used and traction made as nearly as possible in the axis of the pelvic inlet, the probability is that the posterior or parietal bone will slip rather suddenly past the promontory, and the subsequent steps in the delivery will be easy.

Indications for Version.—If, instead of finding the head in the position described, the sagittal suture is discovered nearer the pubes than the promontory, or if the pelvis is not contracted to a high degree, yet the head is so large that its greatest diameter is high above the brim, then (the cervix being fully dilated, either naturally or manually) turn and bring down a foot.

It is not my intention to enter into the comparative merits of these two operations, which so frequently come into competition with each other, but I cannot close this part of my subject without emphasizing a few points which seem to me essential in dealing with any case of delayed labor in the first stage when the head is presenting. The rules for performing either the high forceps operation or version, may be ever so clearly defined in one's mind, but these rules will be capable of very imperfect application so far as determining which is the preferable procedure in a given case, unless the physician has an accurate knowledge of the position of the head, particularly the posterior fontanelle and its exact relation to some determinate point on the maternal pelvis.

This essential preliminary information is difficult to obtain with accuracy unless the patient is placed under an anæsthetic; when this is done, the hand in the pelvis can ascertain the exact location of the posterior fontanelle, the position of the parietal protuberances with relation to the promontory and the symphysis, and the direction of the sagittal suture, as well as its approximate distance from the promontory. The facts should all be made out without the least shadow of a doubt. By so doing only can one be sure of the diagnosis in all its aspects, and be able to select the appropriate operation for the case in hand.

Malposition of the Presenting Part.—The influence of various modifications of head presentations, and of other absolutely abnormal presentations in modifying the first stage of labor, requires no further comment than to insist upon an accurate diagnosis of the exact presentation at the earliest possible moment, since successful treatment will depend upon the solution of this problem. I need but refer to the various malpositions which are sometimes observed. Among the various anomalies of position the non-descent of the head from its impingement on the pelvic brim is sometimes met with. This is the result in most cases of disproportion between the head and the pelvis.

When it is associated with delayed rupture of the membranes, the first stage of labor may be greatly prolonged, but the delay is not necessarily harmful, unless the patient is deprived of rest from long-continued though feeble uterine action.

The malposition is sometimes spontaneously rectified by natural rupture of the sac, which is soon followed by an increase of the pains and engagement of the head.

If the cervix is soft and dilatable, we may imitate nature, and rupture the membranes, which will often correct the difficulty by letting the head down so that it will distend the cervix, and thus accelerate the force and frequency of the contractions.

The first stage of labor may be prolonged by malposition of the uterus itself, which conduces, by misdirection of the driving force, to malpresentations of various kinds and degrees, but pre-eminently those of the brow, or the sinciput, both of which are presentations, intermediate between that of the occiput or the face, or it may be that the face itself will eventually present.

The early recognition of the cause of the vicious presentation, and its correction by changing the axis of the uterus so that it will conform to the axis of the pelvic inlet, will be followed by good results.

The presentation of the head with its occipital portion toward the back part of the mother's pelvis, the high occipito-posterior presentation, is oftener a cause of prolonged and painful first stage than is ordinarily suspected. If delay really becomes a serious factor, in consequence of prolonged pain, the hand should be inserted into the cavity of the pelvis, and the fontanelles accurately located.

If the case proves to be an occipito-posterior presentation, and the cervix is dilatable, it is advisable to rupture the sac, if this has not al-

ready taken place, and at the same time make an attempt to rotate the occiput to the front. This may be accomplished by the use of the external hand, which is used to rotate the anterior shoulder to the left and backward; while, at the same time, the hand inside is employed in the endeavor to rotate the occiput toward the right and to the front. The correction of transverse presentations into the more favorable and absolutely essential head or breech presentations need only be mentioned to be appreciated.

Likewise the fact that breech presentations predispose to a slow first stage, and require no treatment, except that which conduces to rest and sleep when the dilating stage is tediously prolonged.

The subject of malposition and malpresentation is very closely associated with the last division of my subject, viz.:

Uterine Inertia.—Given the case of an ordinary, average, normal woman, one fairly well-built, and her organism in normal condition, if inertia is present, whether primary or secondary, in a great majority of such cases it will be found on examination that the lack of action on the part of the womb is due to malposition or malpresentation of the fœtal body to the maternal pelvis. Nature's forces are so well adjusted to the task which she has set herself to fulfil, that she revolts and, finally, absolutely refuses to make any further attempts to force the presenting part into the pelvis at an angle, and under circumstances where it is mechanically impossible, and a violation of the laws of physics.

Enough has been said on this phase of our subject; I would like to ask your indulgence for a few moments longer to say a few words upon primary inertia from inherent weakness of the womb, its cause, and a possible danger attending this condition.

I refer to fatty infiltration of the muscular tissues of the uterus.

Bossi, of Novara, Italy, has recently published (*Annali di Obstet. e Gin.*, December, 1896), the results of his researches in uteri for fatty degeneration during gravidity.

Three cases were studied.

The first was a primipara in the eighth month of gestation, with a fibromyoma of the anterior wall of the uterus, which, owing to its size and location caused such distressing symptoms that a Cæsarean section was performed, with favorable results to the mother and child, the uterus being entirely removed. Small portions were taken from various portions of the posterior wall of the uterus which showed no trace of fibromyoma.

The second was a woman at term, whose severe hemorrhage from rupture of the uterus, required immediate removal of the uterus by vagina.

The third was that of a uterus removed by Cæsarean section, during the last month of gestation for osteomalacia of the pelvis.

The histological results of examination of small subdivided pieces made it at once clear, that in all three uteri the fasciæ of the smooth muscular fibres had undergone fatty degeneration, adipose fragments

in the muscular fibro-cells were prominent, on account of their intensely black coloration. Careful study showed all the phases of the process, from the initial stage to complete destruction of the muscular fibres.

In the conclusion of his paper, based on his examinations, Bossi asks the following question:

"Could not this process of fatty infiltration, if far advanced and diffused, account for many cases of uterine inertia?"

In answer to the theoretical question I would state that clinical experience, in my own practice and reports of cases from reliable sources, tends to an affirmative answer to the query. I believe that fatty infiltration of the muscular fibres of the gravid uterus does tend to primary inertia. I have seen several cases when I had reason to believe there was a fatty condition of the uterus, and in every instance there was inertia with a prolonged first stage. These patients were abnormally fat, the pelvis lined with fat, they were easily exhausted, and every one required operative interference in order to deliver.

In current literature, during the past year, I have seen reports of cases which were characterized by uterine inertia, which were not only troublesome on account of this complication, but which terminated in rupture of the uterus, every one occurring without the classical symptoms of rupture, there was no tumultuous pain, no sudden cessation of labor, recession of the presenting part, and collapse.

In cases presenting such conditions as I have described—flabbiness, excessive deposit of fat, uterine inertia, whether primary or secondary, and prolonged labor—it would be difficult to decide what to do. Whether to leave the case to Nature or to deliver.

I shall not attempt to settle the question as to the proper course to pursue, and will close with the thought that in all cases where the inertia is primary, in flabby, fat subjects, prolonged labor should be guarded against, and the liability to uterine rupture borne in mind.

Discussion.

B. H. Ogden, M.D., St. Paul, Minn.: I was especially interested in the paper read by the chairman, and particularly the suggestions made for securing the engagement of the head. I have come to fear the difficulties of passing the superior strait, as far greater than the passage of the perineum. The child's head sometimes fails to engage, because the uterus is not expending its force in line with the axis of the superior strait, and for this difficulty the postural treatment is of great advantage. The uterus may be pushing the child's head against the symphysis pubis; in such a case, elevation of the shoulders and body will make the uterine axis point further backward, or the abdomen may be too pendulous, so that force is directed against the promontory of the sacrum; here supporting the uterus will correct its deviation of axis. The same is true of lateral deviations. The object in view is to make the uterine axis (or the line of force) correspond with the axis

of the superior strait. Pelvimetry is a great help to us in all obstetric manipulations, and especially does it help us to determine the cause of non-engagement, and hence the best treatment. We are thus enabled to determine beforehand what is likely to be the best treatment for any given case, and prepare the patient for it. This will save many lives of mothers, and especially of children.

If by the various methods we cannot secure engagement of the head, I prefer version to the application of the forceps, provided the conjugate diameter does not measure less than three and three-quarters inches.

F. J. Boutin, M.D., Independence, Mo.: I should like to refer to the use of chloroform in the first stage of labor. It has been asserted as an axiom on this floor, that "chloroform should never be given in the first stage of labor." I have frequently found, in the first stage, the head pressing the anterior wall of the uterus down, the os so far up behind I could scarcely reach it, consequently the pressure not producing any dilatation. Frequently the os will be so sensitive it can scarcely be touched, and if I try to pull it down, the patient will fairly scream. A little chloroform given just then will null the extreme sensitiveness, and the os can be drawn down and dilated with the fingers until the head will engage in it, when the chloroform can be discontinued if desired. Another troublesome condition in the first stage is to find the head resting on the pubic bone. The pains can accomplish nothing in this condition, yet the patient can hardly endure the distress of having the head pressed back so it will engage in the superior strait. A little chloroform given will allow this to be done without pain or harm to the patient, and she will not call you a "brute" as she ought to, if you would not give her chloroform.

A rigid os is another condition in the first stage of labor which chloroform is more effective in relieving than any other measure. I recall a case in point: I found the patient writhing and crying out with the pains which recurred every two or three minutes. The os was forced down by the presenting head, and although she had been in labor nine hours, and the last six apparently much the same as when I first saw her, the os was scarcely dilated to the size of a silver quarter. I advised the use of chloroform at once; but it was new to them, and they were afraid of it. So I tried various remedies and hot applications for an hour and a half with no apparent effect, when I gave chloroform, with the result that in about an hour the attendants were dressing the baby. Here were hours of suffering saved this woman by giving chloroform in the first stage of labor. Probably five or six more hours' suffering could have been saved her had she had chloroform that much sooner. I have not used chloral any, as it has such a horrible taste; it is not so easily given, the effects are not so prompt and definite, and are longer lasting, therefore, it is not so readily controlled, nor so safe as chloroform.

Ectopic Gestation: Its Diagnosis and Successful Treatment.

By C. B. Kinyon, M.D., Ann Arbor, Mich.

We have a right to assume that doctors are human, possessing the same love of fame that other mortals possess. This being true we need not be at all surprised that many medical writers, teachers, practitioners and operators are inclined to emphasize the newer ideas. Putting forth their best endeavors in contriving or discovering something new. Neglecting or overlooking the older and oft-times well-established principles and methods.

This same element in human nature is responsible to a great extent for the present extreme tendency toward specialism in medicine.

Few are possessed with sufficient perseverance and pluck to fully prepare themselves so as to properly cover the whole field of medicine.

In this rushing, competing age, all feel that they must push for success at once. Hence they hasten to perfect themselves as best they may in one special line, failing to fully grasp the interdependence existing between diseases of the different parts of the system. The above general considerations being true, I have no apology to offer for bringing to your notice at this time the subject of ectopic gestation. For of all the obstetric complications which we may be called upon to meet, none presents a greater diversity of phenomena. No condition presents greater complications. None requires more accurate diagnostic skill. None will test more fully all the powers of the attending physician. And what is more, there is no condition which proves more surely and more rapidly fatal, unless the right thing is done at the right time, and that time is necessarily short, and comes very often without a moment's warning.

The Scriptures tell us that each generation grows weaker, but wiser.

The fact that the present generation is weaker may, perhaps, justify us in concluding that ectopic gestation occurs more frequently than formerly. For ectopic gestation does not take place in a strong and healthy woman. Or it may be that we doctors of this generation being wiser have reached a greater perfection in diagnosis, and thus it is more frequently discovered. Be this as it may, the fact remains that in the past, thousands of women have died from ruptured ectopic gestation sacs, whose death was attributed to peritonitis, to pelvic hæmatocele, or perhaps to heart failure. What a consolation it must be for some doctors to remember that their patients have hearts, and that hearts sometimes fail. Just a word at this point regarding hæmatocele.

During very recent years, a great change has taken place in the minds of our best thinkers, writers, and operators, regarding their

opinion of the cause of pelvic hæmatocele. At least seventy-five per cent., and some put it as high as ninety per cent. of the cases of pelvic hæmatocele, are due to ruptured gestation sacs.

This will not surprise us when we remember how early the blood-vessels of the uterus increase in size. One of the most important of the fœtal appendages, the chorion, begins to form on the twelfth day after impregnation of the ovum, and its villi form very soon thereafter. The capillary loops in these villi are quite large, and bleed freely when ruptured. One other important fact is worthy of elaboration. The impregnated ovisac may rupture and severe hemorrhages follow before the naked eye can distinguish the sac. But the cells of these villi are readily distinguished by the microscope very early. Several cases have been operated upon and reported during the last year, or reported at time of autopsy, as the case might be, wherein the only positive evidence of ectopic gestation was found in the cells of these villi.

All other traces were absorbed, or the rupture was too early for other tissues to be developed. We thus see that the microscope is not only of great value, but it is often our sole means of making a correct diagnosis in some cases of ectopic gestation; as it is only with the microscope that one can distinguish between the decidua of dysmenorrhœa, the uterine decidua of ectopic gestation without the chorionic villi, or the uterine decidua of abortion with these villi present. With all the symptoms of pregnancy present, but no chorionic villi in the discharges from the uterus, we are justified in concluding that ectopic gestation is present. Of course our examination of the discharges must be thorough and exhaustive, but its conclusions are almost absolutely safe.

I have now given you the cue as to why it is possible for the recent observers to speak with such positiveness regarding the fact that ectopic gestation is the chief cause of hæmatocele.

The first clear description of hæmatocele was given by Nélaton in 1850, but he did not give its true cause.

The first successful operation for ruptured tubal gestation was performed by Lawson Tait in 1883.

A third of a century during which the true cause of hæmatocele was not suspected.

Before then, ectopic gestation was looked upon as a freak of nature, and was very rarely diagnosed. We now know it to be very frequent indeed. It is generally conceded that all cases are primarily tubal. Abdominal pregnancy does not occur primarily, and it is very doubtful if the ovarian form does. The fecundated ovum may be located altogether in the tube, or it may be between the tube and ovary—tubo-ovarian—or it may be tubo-uterine. The tubal is by far the most common form. The tubo-ovarian is still in doubt, but some excellent authors claim that the ovum may be impregnated while resting in the fimbriated extremity of the tube.

Exudates and adhesions form around it and bind it to the ovary.

But as this form cannot be distinguished during life it is not worth while to spend more time upon its discussion.

The tubo-uterine occurs in that portion of the tube embraced by the uterine wall. As this occurs so very seldom, I will dismiss it with few words. It does not rupture before the sixteenth to twentieth week, as the uterine walls are capable of distention and will resist rupture longer than the thin non-muscular walls of the tube. The products of conception may find their way into the uterine cavity, but, as a rule, rupture occurs into the abdominal cavity, and is rapidly fatal, as the hemorrhage at that stage and in that location is simply fearful and hard to control, as you cannot reach the arteries in time to save the mother. It can generally be diagnosed from the tubal form, by its being so closely bound to the uterus, or it may bulge into the uterine cavity. In this latter case the treatment is readily outlined.

Simply dilate the cervix and deliver.

Causes.—As the cause has little to do with the treatment, I will say but little about it. Changes occur in the calibre of the tube from inflammation. This inflammation may produce desquamation of the epithelium, or stenosis from adhesions. Or, from cicatricial bands around the tube, forming pouches for the lodgement of the ovum. Some authors claim that the ovum is usually impregnated in the tube. If this is true, it will not be so difficult to understand why this form of pregnancy is so frequent. For after impregnation the ovum rapidly increases in size, and it is very liable to be obstructed at the isthmus of the tube.

Changes also quickly take place in the tube. The walls at first become thicker, because of increased blood-supply. This continues for about two weeks. Then the walls begin to grow thin from stretching, due to growth of ovum. The walls also grow weaker from the ingrowth of the chorionic villi. The fimbriated extremity gradually narrows, and is closed completely at the eighth week. Tubal abortion is not possible after that time, and the rupture can occur only in the tubal wall. The rupture may be hastened by external causes, such as lifting, straining, a sudden unexpected misstep, or coitus. From internal causes, such as hemorrhage from, or separation of the tubo-chorionic vessels. The rupture may take place through the portion covered by peritoneum into the abdominal cavity, or it may rupture through the part not covered by peritoneum, into the folds of the broad ligament. Classified as intra- and extra-peritoneal rupture. Intra-peritoneal rupture is often immediately fatal. If the rupture is small, and is not near any important blood-vessels, or the opening is filled up by the chorion, the hemorrhage is not fatal. The blood collects gradually in the cul-de-sac and slowly clots, and peritoneal adhesions soon roof it in. The adhesions may become organized into a new sac. This new sac may rupture and be fatal at any time, or these ruptures may recur repeatedly. The fœtus usually dies at first rupture, but may go to term. New membranes may form around it, or it may be left free in abdominal cavity, and the placenta still retain its hold in

the tube, and thus furnish nutrition to the fœtus. It is then called abdominal pregnancy, but was originally tubal. Rupture into the broad ligament—extra-peritoneal—is generally fatal to the child, but not so fatal to the mother or child as the other form. Nearly all full-term fœtuses are extra-peritoneal. The chorion and later the placenta enlarge their hold upon the mother's tissues or organs to receive enough blood to maintain life in the child.

The placenta most frequently fastens itself well down in the pelvis, but may be fastened to any of the tissues or organs of the pelvis or abdomen. The omentum, intestines, liver, spleen, any or all of these may be involved in the placental implantation.

It is this possibility that makes it necessary for us to be prepared for any emergency in every operative case we meet. In the extra-peritoneal variety the folds of the broad ligament are pushed apart. Uterus forced to one side and crowded up out of the pelvis, together with the peritoneum, and all the contents of the pelvis and abdomen. Secondary hemorrhage may occur in the abdominal cavity in this form of pregnancy, and result fatally or not, according to amount of blood lost and location of rupture in its relation to the placenta.

Tubal abortion can only occur during the first eight weeks. Tubal rupture generally occurs from the third to twelfth week. Average is eight weeks.

In early rupture and death of the fœtus, the ovum and its surrounding membranes are usually absorbed.

When the fœtus lives to be more than three or four months old, it may mummify, calcify, turn to adipose, or suppurate. Fœtus never goes to term in the tube; it may in the abdominal cavity, but it most frequently goes to term in the broad ligament.

Diagnosis.—More depends upon early diagnosis in this than in any other condition which the obstetrician has to meet.

So, I feel justified in going somewhat into detail regarding the history and symptoms of every case I see, for the purpose of reaching an early diagnosis.

During the early weeks there are the usual signs of pregnancy, except there is apt to be more or less flow at time of first and second menstrual period. The patient generally concludes that she is pregnant, and very often does not consult the doctor until collapsed from rupture. At this time there is a sudden sharp pain on one side, excruciating in character. Patient feels faint and dizzy. May lose consciousness. Vomits. Has cold clammy sweats. Pulse rapid. Temperature below normal as a rule. More or less hemorrhage from the uterus, due to separation of uterine decidua. Patient, and possibly doctor, concludes there has been a miscarriage. Some discharge may continue for weeks, containing shreds of clots often. If the microscope tells that there are no chorionic villi, miscarriage is ruled out, and the diagnosis of ectopic gestation almost certain. Pelvic peritonitis develops rapidly as a rule. Ruptures recur occasionally.

Recapitulation.—Menstrual irregularity. Symptoms of pregnancy.

Sudden sharp pain. Syncope and vomiting. Metrorrhagia; and all these symptoms are preceded by a period of sterility as a rule.

Within the last five years so much has been done to clear up these cases that diagnosis before rupture is quite possible, and in the hands of experts the rule, provided they see the patient in time. This early diagnosis is so essential to the welfare of the patient that we may almost say her life depends upon it. This being true I take the time, even at the risk of repetition, of enlarging a little upon the early symptoms of tubal gestation.

First let us speak of the physical signs. Before rupture: Distended tube, with more of a boggy feel than in hydro- or pyosalpinx. Uterus enlarged. Enlargement most marked in long diameter of uterus. Cervix soft. Os patulous.

Immediately after rupture: There is no distinct tumor. Sensation of fluid or indistinct doughy feel in pelvis, especially in Douglas's pouch. Symptoms of internal hemorrhage. Rupture in broad ligament gives us hæmatoma. Blood clots quickly, and is quite firm, because the broad ligament holds it firmly, and the pressure is sufficient to cause firm clots and arrest the hemorrhage.

Three keynote symptoms I will repeat. 1, Pain, its character, location, and manner of occurrence. 2, Irregularity rather than suppression of menses, and often accompanied by uterine decidua without the chorionic villi. 3, Small lump in the tube, size of the thumb, and not adherent at first. This lump soon becomes tender and fixed by adhesions. These lumps are very vascular, often pulsating under the finger. I always make it a point to obtain as full a statement as possible regarding the pain, in the patient's own words. They all speak of it as excruciating in character, coming on in paroxysms, with intervals of freedom from pain. These attacks of pain are likely to come two or possibly three weeks after menstruation. Generally in one groin, though they may be across the abdomen. Extending down one leg, or up to the epigastrium. Being so very severe as to cause profound systemic disturbances. The terrible pain often causing more shock than the hemorrhage. In fact, shock may be very profound, and little hemorrhage found at time of operation.

Differential Diagnosis.—It will require some care to distinguish ectopic pregnancy from the following: Before rupture physical signs are similar in this and in hydro- or pyosalpinx. Before rupture in ectopic pregnancy there are the usual signs of pregnancy, and these are not present in either of the other conditions. After rupture in ectopic pregnancy pulse is more frequent. Temperature subnormal (a rare combination), and the pain is very severe, but short and recurring. Loss of blood, or collapse, very marked. Septic symptoms absent, or slow in developing. In pyosalpinx pulse is slow, and gradually increases in strength and rapidity. Pain lasts longer, and is more steady, but not so severe. No loss of blood internally or collapse present. Sepsis manifested early and increases rapidly. It is sometimes difficult, from physical signs alone, to differentiate this from fibroid of ovary

or fibro-myoma, but the history will clear up all doubts. Fibroid is of slow growth, much harder, and fibro-myoma is more intimately connected with the uterus.

They may both be present, when the patient's condition is indeed serious. Ovarian cysts readily told by history and absence of pregnancy symptoms.

Hæmatocele is so nearly synonymous with ectopic pregnancy that I will not take time to discuss it further.

Treatment.—During the last few years, or I might, perhaps, better say, during the last two years, there has come such a change in the minds of the profession regarding the treatment of this condition, that we are not justified in concluding that any fixed standard of procedure has yet been reached. At present, and for some time to come, each physician will be more or less influenced by his personal predilections. Some will adopt the so-called expectant treatment. Others will try to kill the fœtus by electricity. While still others, those of a surgical turn, will advocate and practice surgical procedures in all cases. These will in all cases resort to laparotomy or elytrotomy, according to the location of the fœtus and placenta, or according to the bias of the operator for the vaginal or abdominal route. In my opinion, elytrotomy is applicable only in cases where the fœtus is dead, or is impacted in the pelvis, and we are pretty certain before operating that the placenta is attached high up in the pelvis or in the abdomen. Even then all we can do is to remove the fœtus, drain through the vagina, and allow the placenta and membranes to come away by degrees.

It is perhaps true that electricity is not as much used as formerly, but I still feel that before the death of the fœtus, which generally occurs at the time of rupture of the sac, there may be conditions or circumstances under which electricity should be used in preference to the knife. Ectopic gestation should always be looked upon as a grave obstetric complication; one in which the life of the mother is in constant jeopardy. The chances for the child are so very remote as to hardly be taken into account. So our whole thought should be for the mother.

If the attending physician is not a skilled operator, if he is far removed from such help and there are no urgent symptoms, he is justified in using electricity for the purpose of killing the fœtus. This is allowable in the earlier months of gestation; not later than the fourth month. The faradic current is the only one to be thought of. Place the negative electrode in the rectum or vagina, whichever will bring the electrode the nearest to the sac. The positive pole with a large, flat electrode on the abdomen, just over the sac. Allow the current to run five or ten minutes. Let the strength be regulated by the tolerance of the patient. Continue this daily until the sac begins to grow smaller. Then you may know the fœtus is dead, and the liquor amnii is being absorbed. We must not forget the fact that the electric current sometimes ruptures the sac, but by anticipating such a contingency we will be prepared to combat the resulting collapse, and tide the patient over the crisis.

Laparotomy.—Before rupture the operation is comparatively easy for one accustomed to abdominal work. Simply tie ovarian artery at distal and proximal end of the tube, and take out the mass. If sac is not broken in removal the abdomen is closed without drainage. After rupture into abdominal cavity prepare to open the abdomen at once. If operation is imperative, it is demanded because of hemorrhage.

Should the pulse show any sign of improvement, wait until shock is over. When the patient has rallied from the shock it is best to operate as a rule. This must be done rapidly, as the patient, at best, is not in a very good condition for such a serious operation. Enter the abdomen through a good free opening, and first seize and ligate the bleeding vessels, if any can be found. If not readily found tie the ovarian artery, and then take time to clean out the blood-clots and all the products of conception. Flush the cavity, and as a rule leave in drainage. To tide the patient over the shock, flush the cavity thoroughly with saline solution, and after the cavity is clean leave in some of the solution. Only a few days ago this expedient brought the pulse from forty, and very feeble, up to sixty-eight, full and strong, in two minutes, in a patient upon whom I was operating.

In extra-peritoneal rupture the shock is not so great. Do not operate as a rule. Keep the patient quiet and apply cold at first, and later apply heat. Fomentations of poppy-heads have served me well in four cases. Have two sacks, and change as often as need be to keep them hot and to control the pain. Absorption generally takes place in due time. If it does not there may be suppuration, caused by absorption of poisons from the intestinal canal. In this case drainage through the vagina is the best method of treatment. If hemorrhages recur, laparotomy will be indicated.

We have thus far had in mind the treatment during the first four months of gestation. After this period the treatment embodies some different principles, and will necessitate somewhat extended notice. Remember that in nearly all these cases the fœtus is extra-peritoneal. In all cases where operation is undertaken keep outside of the peritoneal cavity if possible. After the fourth month, rupture is not so liable to occur, for, by that time the placenta has secured such a firm hold that life can be maintained for the whole period of gestation. It is easy, as a rule, to tell whether the child is alive. Fœtal heart-sounds can generally be detected, and ballottement can generally be practised. The fœtal movements are quite distinct after the fifth month. These, together with the rapid increase in the size of the abdomen, are sufficient to make the diagnosis clear. At this stage we are brought face to face with a serious problem. Operation should not be lightly considered, because there are great probabilities of death from hemorrhage at this stage of development. Should the symptoms call for an operation it must be performed very rapidly. Make a large opening in the abdominal wall, so as to be able to locate the placenta promptly. Do not disturb this. Open the sac and extract the fœtus.

Cleanse the sac; stitch it to the abdominal wall, and pack the sac cavity to control hemorrhage, leaving the placenta to separate by degrees. Watch the placenta at each dressing, and if it can safely be done, at any time, take it away in a mass. If it cannot so be removed, it must be allowed to come away by piece-meal. This is the usual mode of procedure, for the long-standing abnormal conditions have produced such extensive deposits and firm adhesions, that the products of conception cannot be removed at the time of operation. Of course, remove sac and all, if possible, but do not take too many chances of fatal hemorrhages by disturbing the placenta. At the time of spurious labor the sac may be ruptured. If it is, our only hope rests in operation. Always be prepared to operate with but a moment's notice. Rupture here can be told at once, and we must operate. If the sac does not rupture, the fœtus will die in due time from the shock of labor. After its death the spurious labor ceases. With the death of the fœtus we still have a serious condition to deal with, but all agree that it is best to watch the case closely, but not to operate unless urgent conditions demand it. These conditions will be peritonitis, or some form of blood-poisoning.

Our reason for delay is that we expect the liquor amnii to be absorbed, and the circulation in the placenta gradually cut off. The operation can then be undertaken with reasonable assurance of success. If we find on opening the sac that the placenta still has more or less circulation, the operator must decide what course to pursue in the case in hand, keeping ever in mind the immediate danger of hemorrhage, on the one hand, and the more remote, but equally serious danger from sepsis on the other, and choose the best plan for the case in hand.

There is a great difference of opinion as to the best course to take after the death of the fœtus, and all immediate danger of infection has passed. The weight of authority is undoubtedly in favor of operation, and not trusting to nature to keep all the organs and tissues in harmless state. I have had no personal experience in cases of long-retained products of ectopic gestation.

Professor James C. Wood, of Cleveland, O., has an excellent article in the first issue of the *Homœopathic Journal of Surgery*. He therein gives the history of an exceedingly interesting case, where he successfully removed a lithopædium of years' standing.

It is always best to remove these fœtal remains by laparotomy, no matter what condition they may be in, as their presence is always a menace to the health and life of the patient.

Numerous cases are on record where the products of conception have excited suppuration, resulting in long periods of ill-health, or perhaps death, many months or even years, after the death of the fœtus.

Since reading Lawson Tait's famous article, some thirteen years ago, I have had eleven undoubted cases of ectopic gestation all told. Before then, I presume, I had cases, but did not recognize them. The following case is chosen because of its peculiar features and special interest.

Mrs. B., aged thirty-four, was admitted to the Homœopathic Hospital of Michigan University, at Ann Arbor, March 10, 1898. Her history briefly outlined is as follows:

She was married in February, 1897. Her health had been very poor for several years. Menses irregular, scanty, and very painful all these years. Late in November, 1897, nine months after marriage, she was taken with a severe attack of what was diagnosed at the time as gastristis. In a few days the fever subsided and she had all the usual signs of pregnancy. The stomach was also unusually irritable. This condition continued until in January, 1898, when she was suddenly taken with very severe pains in the lower abdomen, and this could only be controlled by morphine. After these pains had continued for a week or so, during which time she had often been so low that they thought her dead, she began to flow quite freely and passed a mass of blood-clots and membranes. The attendants concluded that she had aborted. But it was evidently the uterine decidua of ectopic gestation.

She then rallied a little and was able to take a little food and could, with the greatest care, be turned a little in bed. Temperature was below normal for the first day, and 101° to 102° F. for two weeks thereafter.

These attacks recurred about every two weeks, each being less painful, but leaving her weaker until about March 1st. She then rallied a little, and on March 10th was taken to our hospital, for the purpose of having a large ovarian tumor removed, as they said to us. She was nearly moribund when she entered the hospital, and it required the most watchful care for several days to keep her alive. When she had rallied a little I made a careful manual examination. The patient was too weak to take chloroform. I found a mass firmly imbedded in the right side of the pelvis. It was about 2½ inches thick, 4½ inches wide, and 12 inches long. It was firmly fastened to right side and front of the pelvis and was very firm, but not tender. After obtaining a careful history of the case and repeated examinations, I diagnosed ectopic gestation, and made all arrangements to operate as soon as patient was strong enough. She was very weak indeed. At this time weighed but sixty-four pounds. Weighed one hundred and seven pounds when taken sick in November. She really looked more like a corpse than a living woman. This examination was made on March 13th. On the 14th she had another collapse. The relapses occurred about every two days, for over two weeks, so that there was not enough gain in strength to justify operation. Since entering the hospital she had been taking Kali iodide and China, internally, and poppy fomentations were applied externally. Early in April she had gained enough to make it safe to give chloroform, which was done, and a thorough examination made. Very much to my surprise, I found the growth quite a good deal smaller. Of course, I felt encouraged at the outlook, and decided to give nature time to absorb the mass of blood-clots and membranes, holding myself in readiness to operate at any moment, if conditions demanded it. Continued the Iodide of potash, with an occa-

sional dose of Hydrastis for the stomach trouble. At the present writing (June 18th) the mass is all absorbed except a small lump at the fimbriated extremity of the tube. This is not tender, but quite hard. Is growing smaller gradually. If it does not continue to do well I shall remove it through the abdomen. Patient is now menstruating, with less pain than ever in her life, and more naturally in quantity and character. Has gained twenty pounds in weight, looks, feels, and is much better in every way. An important factor in the rapid absorption of the deposit, as I consider it, was the local treatment I gave during the months of April, May, and June.

This consisted mainly in the application of Iodine compound to the endometrium, and the placing of the vaginal wool tampon, saturated with a mixture of Glycerine, Calendula, Geranium, and Carbolic acid. This treatment was given every third or fourth day. Of course the uterus was well dilated and cleaned out at each treatment. The uterine walls were so soft and friable that I felt it was safer to swab out the cavity with iodoform gauze rather than use the curette. Copious hot vaginal douches were given daily.

Let us draw a few conclusions from this case. With proper care the correct diagnosis could readily have been made out before the time of rupture, and an operation could have been safely performed. At the time of the first rupture was also a good time to operate.

When she entered the hospital an operation was not to be thought of as at all safe. Our only course was to keep the patient alive with stimulants, given hypodermically, until nature could come to our aid. This she did in a few days. The rupture occurred so early in gestation that all the products of the conception are absorbed, and in a few weeks, with proper care, this woman will be perfectly well.

Do not for a moment look upon this case as being my idea of the proper treatment for ectopic gestation. I have reported it because it is out of the ordinary run of cases, and yet any of you are liable to meet such cases, and my experience may be of value to you.

Discussion.

L. L. Danforth, M.D., New York City: I consider a positive diagnosis of extra-uterine pregnancy *before* primary rupture one of the rareities of medical experience.

Lawson Tait, who has taught us so much on this subject, practically says that a diagnosis previous to primary rupture cannot be made, or that we shall fail so often it amounts to the same thing. Personally, I believe it possible to make a correct diagnosis, but the instances where we can do so are very infrequent; our successes are due rather more to good-luck than to any unusual skill in diagnosis. One great difficulty in the way of arriving at any conclusion whatever in these cases is the lack of opportunity to make an early examination. Very often the physician's opinion is not asked during the early weeks, and al-

though the symptoms of the patient may be unusual, they are treated lightly and nothing done until the shock of rupture impels the patient to seek medical advice. Then, again, when an opinion is asked, the physical signs are so obscure or so general in character, and the history so misleading, one cannot be sure that he really has a case of extra-uterine pregnancy, although he may strongly suspect such a condition. I do not deny that it is possible to make a diagnosis before primary rupture. The current medical literature of the past ten years, or since we began to have more positive knowledge on this subject, shows numerous instances where an early diagnosis has been made, and the diagnosis confirmed by the results of an operation or by an autopsy.

A recent experience leads me to advise great caution in pronouncing a positive diagnosis, even though the history and physical signs all point to this condition. The experience referred to was the following: I was asked to see a physician's wife, in consultation, by a colleague in New York City, a man most cautious in his judgments and thorough in his methods. He had prepared the history, and read it to me from his notes. I need not recount the symptoms, but they could not have been more suggestive of extra-uterine pregnancy if they had been compiled from a text-book. And the physical signs were almost as positive. My diagnosis agreed with that of my friend, and a third physician, also skilled in diagnosis, agreed that the symptoms certainly were strongly suggestive (he did not examine the patient) of extra-uterine pregnancy. The patient was about three months advanced, and therefore had reached the period when rupture was to be feared. An early operation was advised and accepted. My friend performed the operation, and behold! there was no extra-gestation sac, but a normal pregnant uterus. The abdomen was closed and the patient speedily recovered. A confiding trust in a history, substantiated by what we believed were unmistakable physical signs, led us astray. Probably, if the truth were known, many others have fallen into the same error. I say again, doubtless a diagnosis of ectopic gestation can be made before primary rupture, but the instances when one can do so must be very exceptional.

JOSEPH C. FAHNESTOCK, M.D., Piqua, Ohio: I have enjoyed the doctor's paper very much. In reference to a diagnosis before rupture there are many things to be thought of. It brought forcibly to mind a case I had in 1893. One of my patients had pain in the abdomen and collapse, with indications of hemorrhage; I gave her what I considered the indicated remedy, and she grew better and was about for some time. There was a small growth on the right side, and anyone would have called it an ectopic gestation. She went to the World's Fair and had another attack; abdomen greatly distended, cold perspiration, with all the symptoms of collapse. I advised laparotomy, which was agreed to, and, to my surprise, I found a small uterine fibroid with the pedicle twisted upon itself, producing all these symptoms. I was wondering how the doctor would differentiate between appendicitis and ectopic

gestation. In appendicitis they will go along apparently well, with or without menstrual irregularity, and suddenly collapse. The same conditions might be found with omental tumors. We find the conditions also where an old peritonitis interferes with intestinal action, leading to collapse. I believe that many cases diagnosed as ectopic gestation turn out to be something else.

WILLIAM A. FORSTER, M.D., Kansas City, Mo.: As to the diagnosis of ectopic gestation, it depends upon each individual case. In the case of a lady the size of Dr. Fahnestock it would be a difficult matter, but if of my build it would be decidedly easier. One point to be considered which was not fully brought out is the rapid growth of the tumor: then you have all the symptoms of pregnancy, and almost always the expulsion of the decidua, that you do not have in appendicitis. There are the ordinary symptoms of pregnancy. In a person not too fat you can almost outline the appendix. Take a fibroid, and it will feel different; it is harder, more elastic, and does not grow as rapidly. You may have other things to confuse you, as an ovarian cyst, but it has not the throbbing or the expansive pain. The ovarian cyst would fluctuate; the uterus would be patulous in gestation and not in appendicitis. Then there is the history of sterility for some time, with ovarian and tubal disease. There is some disease of the lining of the tube which prevents the descent of the ovum. I should not rely upon electricity, but would cut down in a moment if there was a chance for the woman. I do not believe there is much difference between the action of the positive and that of the negative pole in these cases.

Four weeks ago yesterday, I operated upon a case of double ectopic gestation, which I consider a rare condition; right tube had ruptured; the hemorrhage was dreadful, but she made a perfect recovery.

T. G. COMSTOCK, M.D., St. Louis, Mo.: I have no faith in electricity in these cases, but believe they are surgical from the start. With due respect to Dr. Kinyon and his entire paper, I think the last case reported was not ectopic gestation. It was a very doubtful diagnosis.

J. J. THOMPSON, M.D., Chicago, Ill.: I do not want to say that electricity is never advisable, but I do believe that in a majority of these cases we can make a correct diagnosis in a simple manner and early in the case by going into the peritoneal cavity through the vagina. In several cases, where in doubt, I have invaded the peritoneal cavity through the cul-de-sac, hugging the uterus very closely, and have thus been able to remove cystic tubes; only recently, in this manner, I removed a pus-tube and ovary as large as a hen's egg. Two weeks after leaving the hospital the patient resumed her work as a floor lady. In nine out of ten cases, where there is such uncertainty, we may find out in this way and with little danger. If you find it necessary, there is nothing to prevent completing the laparotomy through the abdom-

inal route. Clamps and ligatures may be as easily applied for these cases as in case of vaginal hysterectomy.

WILLIAM A. FORSTER, Kansas City, Mo.: As to entering through the vagina, it is all right for the purpose of diagnosis, but we should remember the exceeding vascularity of this region, and we may have a hemorrhage with the ectopic gestation which it may be impossible to arrest. If there was a good suspicion of ectopic gestation, I should hesitate a long time before going in this way.

DR. KINYON: As to the electricity, I have never used it, but operated upon a case where it was used, and found it killed the fœtus. One of the best men of the country—Thomas, of New York—advocates it; it was largely upon the strength of this one case and the recommendation of Dr. Thomas that I spoke of it. As to the case mentioned, we used the microscope and demonstrated that the diagnosis was correct; we had the typical membranes without the chorionic villi. Whereas the diagnosis is not made in ninety-nine out of a hundred cases, I do believe it may be correctly made in the majority of cases if the patient will come to us in time. But I never make a positive diagnosis of things in the pelvis without an examination under anæsthetics. If you will mix one dram of nitrite of amyl with a pound of chloroform, you will see how much quicker and safer it will do its work. As for the diagnosis, you have in every case the history of the patient, the pregnancy symptoms present, subjective and objective; you have the throbbing pulsations and the rapid growth. I should be afraid to tackle the gestative sac through the vagina; I should prefer the abdominal method when in doubt. I have diagnosed ectopic gestation in three cases before operation. The pregnancy in one case was less than one month.

Albuminuria in Pregnancy.

By Amelia Burroughs, M.D., Boston, Mass.

In taking up this very interesting and important subject, I do not expect to do it justice. Time and ability are lacking; but if I can bring forth only one or two rays of light, which will assist in relieving one afflicted individual in the future, my efforts and time will be more than well spent.

I shall not attempt to give a technical description of the disease before us for consideration, as that would seem an insult to your knowledge as physicians.

I believe that among all the complications a physician may be called upon to contend with in the pregnant state, from beginning to completion, albuminuria is the one most to be dreaded. Why? Because it is the most insidious in its progress, the most mysterious in its development, the most terrifying in its effects, and consequently, the most difficult to control.

I am sorry to have to say (if I speak the truth) that I believe physicians, as a rule, neglect to investigate the condition of the patient as early as they ought, in pregnancy. I know albuminuria is often pretty well established before the patient herself becomes cognizant of the fact that she needs medical advice, trusting, as she too often does, to the advice of friends, who lay all her ailments to her pregnant condition, especially if a primapara. Therefore, it would seem to the physician that his first duty is to try and educate the patient in this, as in many other respects. But accepting things as they are and not as they should be, what are we to do when a case presents itself for our consideration and advice?

First, under all circumstances, examine the urine thoroughly as to quantity and quality, at different times and under varying conditions, for it varies greatly through pregnancy—changeable at all times, but more especially then; consequently it is not necessary for us to have all the symptoms of albuminuria before we investigate. To my mind the urine is a guide-board to many abnormal conditions, aside from the subject now before us, and its examination would often open the doors of mystery, which seem beyond our powers to unlock, and would show us an avenue of relief in the treatment of disease; and this examination is too often neglected. But thanks to the advancement of science, the scales are falling from many eyes. Chemistry and the microscope having in the present day unlocked many a dark closet. How little the physician of the present appreciates his advantages, with

all the aids to diagnosis that are at hand that our forefathers knew not of. When we compare our treatment of to-day with that of the past, and realize that in albuminuria, bloodletting seemed to be the panacea for this, as well as many other troubles, the only surprise in the minds of the intelligent practitioner is that so many survived.

When we take into consideration the wonderful amount of work the kidneys are called upon to do when in perfectly normal condition, is it not a wonder that our pregnant women escape this trouble, as the majority of them do? I may be taken to task for insinuating that pregnancy is an abnormal condition—possibly I am in error—but in the present condition of women (to discuss which would take too much time in this paper) I do call pregnancy an abnormal condition.

Let us dip just slightly into the physiological condition of the kidneys, admitting with Tigerstedt "that in one minute, the quantity of blood leaving the left ventricle equals 5.1 per cent. of the weight of the body, the kidney receives about nineteen times more blood than the tissues of the other organs of the body taken together," what friction there must be. Take the anatomical structure of the kidney, its tubes lined with delicate, sensitive epithelium, so susceptible to irritation on the least provocation. Now consider the position of the kidney, as pregnancy advances; pressure is brought to bear on it, and all the surrounding organs, the blood-vessels are taxed to their utmost, we have an excess waste which the kidney seems to find it impossible to get rid of. Inflammation is the result, and we have its accompanying symptoms, which if not recognized in the early stages, go on until we are brought face to face with uremic poisoning, and in former days we would have been told "death must follow," but thanks to the light of a new era, Homœopathy came to the front, and abolished the opening of arteries for the feasting of microbes and the devitalizing of the patient, often taking away the chances of life.

I could give a long list of remedies, but that would be useless; we are physicians, not students, and we are supposed to know what they are. Did we mention medicines to be helpful to each other (and that is what this meeting should be for) we would wish to discuss their individual merits as we have separately proved them in our own practice; but, although I believe implicitly in the curative effects of our remedies, carefully and intelligently selected, and that they may have power to cure without any further assistance, I believe in clearing away all the obstructing debris possible, and thereby making the way as clear as I can.

Therefore, I advise my patient to use water freely, internally as well as externally. The Almighty has hidden many a spring of water loaded with medicinal properties, which, when man has advanced far enough mentally to comprehend the value, has been brought to light and is being utilized at the present time, the world over, by the Homœopathist, allopathist, hydropathist, and every other "pathist," for the benefit of their suffering fellow-men; and in no place has it proved a greater blessing than to pregnant women, especially when threatened with albuminuria.

Would I overlook the diet? Oh, no. I always look after that in all my cases of pregnancy, advising fruit freely, especially oranges and lemons. Milk to be freely used when it can be taken. In my experience in the treatment of albuminuria of pregnancy each case requires thorough individualization, and when any physician attempts routine practice in such cases, he will fail. In fact, no true Homœopathist will be able to adopt routine work. One of the most essential things in a case of this kind, is to keep the patient as free as possible from nerve strain. Everything should be done to prevent waste of nerve-tissue. And in this matter we often have more to contend with from the patient's family than from the patient herself. In this enlightened age, no physician can afford to close his eyes to the vital force of psychological influences and their effects upon patients. We must advance with the times and not leave a stone unturned which can in the least benefit our patient or prolong the life intrusted to our care.

Now that we have done all we can for our patient from the time she first came into our hands, conscientiously examining the urine every day, week, or two weeks, as has seemed necessary, and carried her through the period of gestation up to the time of labor, we still have the danger of convulsions before us. Sometimes labor is introduced with convulsions and they continue until delivery (which should be hastened as quickly as possible), or the convulsions follow labor, or we may have them both before and after labor. I believe it is now accepted to be the correct thing to keep the patient under the influence of chloroform, and thereby prevent convulsions, if possible. And yet, in the face of it all, I believe the majority of women need not be obliged to resort to abortions to live through these conditions. I speak from an experience of eighteen years, nearly fourteen of which was spent in the city of Omaha. I never lost a patient where I had her under constant care beforehand, and only lost two, which were really emergency cases, and one of these was syphilitic.

Discussion.

Henry C. Aldrich, M.D., Minneapolis, Minn.: I am almost sorry that I have been selected to lead the discussion on this subject, because, in my own practice I have had practically no experience in this line. The few cases I have had to deal with have been in consultation with friends, who, perhaps, did not know any more about it than did I. I must say that I am extremely sorry that the author did not elaborate upon the abnormalities of pregnancy; it is a point which to me is quite new. I also regret that she did not dilate more upon the changed condition of the kidney, and trust that some of the others present will help me out along this line. Another question I desire to ask is whether or not this condition is due so much to the casting off of the albumin as to the retention of urea? As to the treatment it was not mentioned; I have seen the best results follow the use of Mercurius corr. and Am-

monium carb. The essayist refers in a general way to the mineral waters as beneficial, and I can say that the Poland water has done good work for me in the cases that have come under my observation. Psychological influences are said to exert a baleful influence upon the pregnant woman, and I believe that these influences are just beginning to be understood.

C. B. KINYON, M.D., Ann Arbor, Mich: I would like to give my experience with the use of chloral. I always go to a case of confinement with a bottle of chloral hydrate. It is a good diuretic, controls pain, and will do more to cure albuminuria than all the materia medica put together. I have had cases where the amount in the tube would appall you, the patient with convulsions and puerperal insanity, and I have never seen a case it would not cure. I give a teaspoonful every fifteen minutes in case of pain until the patient is quiet, or I have given six or seven doses. In pregnancy a teaspoonful every two hours makes eight grains every two hours. I recollect one case of convulsions where I wanted to give chloroform and deliver, but the other doctor said give chloral; he said it would dilate the rigid os, and it did. I am never without this mixture.

℞. Choral hydrate.... ..... ʒ ij
Syr. simplex,
Aqua dest..... āā ℥ ij
Sig. Teaspoonful every fifteen minutes until quiet.

T. J. MERRYMAN, M.D., Lincoln, Neb.: I think Euonymus is a remedy which is not sufficiently studied in these cases.

Dietetics in Obstetric Practice.

By C. A. Weinrick, M.D., Chicago, Ill.

Pregnancy is a normal condition. The development of the fœtus in utero, its birth, and the subsequent formation of milk in the mammæ of the mother for its sustenance are physiological acts. It is a mistake to speak of the date of parturition as the time the woman will be sick. The maintenance of the health of the woman if she be well, its restoration if she be ill, and the highest development of the child are the objects sought from the physician. All treatment, including dietetic, is for the purpose of attaining them. Any diet that impairs the health of the mother or hinders the development of the child should be avoided. It would be superfluous to state such a self-evident truth were it not that a diet is recommended that has for its purpose the amelioration of the pain and shortening the duration of labor by preventing ossification of the bones of the head. An insufficient quantity of inorganic food will impair the nutrition of mother and fœtus. An excess of salts will derange digestion, but not promote ossification.

If during pregnancy the mother be in a normal condition the same kind of food that is proper for her when not pregnant should be given, if ill, the same diet for similar affections occurring at other times. For example; did albuminuria occur the proteids should be avoided or a minimum amount taken the same as were the woman not enceinte. The woman's special attention should be called to the necessity of taking a sufficient quantity of water in twenty-four hours. The tendency is to take too little rather than too much. If she be a tea-drinker, derangements of the digestive organs are more liable to occur than were she to abstain from it. If accustomed to this beverage, and it is not advisable to discontinue its use; black tea is preferable to the green variety. The custom of adding carbonate of soda to neutralize the effect of the tannin will in some cases neutralize the hydrochloric acid of the stomach to such a degree as to impair gastric digestion.

Several years ago, in a paper read at the Illinois Homœpathic State Association, I called attention to two classes of mothers. As subsequent observations confirm those previously made about them, and as diet is the most important factor in the management of one of these classes, it is within the scope of this paper to direct attention to them. In one class the mothers are languid, feeble, and more or less emaciated, both during gestation and lactation. Abortions and premature deliveries are common. Their children at birth and during lactation are plump, well nourished, vigorous, and good. The mother does not understand

why her child can be so good and feel so well when she is so miserable. If a mother without organic disease feels miserable during pregnancy she will almost invariably give birth to a child fitting the above description.

In the other class the conditions are reversed. The mother feels well, is strong, and looks vigorous during gestation and lactation; the child at birth is of the puny, half-starved variety, and does not thrive as long as it is dependent on the mother for sustenance. It whines, cries, and has the reputation of being a cross baby, simply because it has a normal appetite and makes the only protest it can against an insufficient diet.

In the brute creation the analogue of these two classes is found in domestic cattle. The dairy cattle corresponding to the first-mentioned class, and the stock cattle, or the variety raised for beef producers rather than milk, to the second class. I am sure this statement will be corroborated by the observation of those who have lived in the country. The weak mothers digest their food, which is not used to nourish their own bodies, but that of the child in utero, and to supply it after birth with an abundance of milk. The strong mothers digest their food, and, in addition, supply it to their own nutrition at the expense of that of the child.

Only theories can be given in explanation of these facts, and hence not satisfactory. For the weak mothers, most benefit is obtained by giving prepared food. Murdock's has produced the best success in strengthening the mother during the periods of gestation and lactation without the least detriment to the child. In cases of this class, which have previously been pregnant and shown their usual tendency to miscarry or have premature labor, it is the only treatment I have found that may be used with any reasonable degree of certainty and comfort to the patient. For the strong mothers having weak children there is no treatment, dietetic, hygienic, or medical, that will help the child before its birth. Deprive the mother of sufficient quantity and quality of food and she suffers; give her any kind of food and she appropriates it to her own tissues. After the child is born, the right course to pursue—and there is but one right course—is to resort partially or wholly to artificial feeding. The stereotyped advice that the mother's milk is the best food is just as pernicious for this class of cases as that which prescribes milk in all case of typhoid fever.

Special mention should be made of nausea, constipation, and albuminuria, because they are so liable to occur during pregnancy. Nausea, when strictly the nausea of pregnancy, cannot be either controlled or palliated by diet. When it occurs at certain periods of the day, food should be avoided at that time. When it is continuous, the food should be predigested and given to the patient while in a recumbent position. In some of these cases, coffee without cream or sugar will be tolerated. In severe or long-continued nausea the following is advised: Partially predigested milk or gruel, malted milk, somatose, or dry, nicely toasted bread. Food should be given every three hours.

If the case be so severe that it will be ejected soon after ingestion, nutrient enemata should be given every four to six hours. Partially pancreatanized milk, beef, and white of egg may be used with success. Avoid the use of fats and starches in the enema, and observe the same care to prevent the expulsion of the food and irritation of the rectum as in other conditions requiring rectal alimentation. But this reflex symptom must be controlled by other than dietetic measures.

Constipation, so common in women, is usually aggravated during pregnancy. I believe much harm, often serious, is done by permitting this condition to continue. It causes malaise and elevation of temperature, the latter most frequently during the post-partum period. For seven or eight months of pregnancy it can best be met by observance of such dietetic regulations as are commonly advised for constipation. But during the last month or two of the term, when there is a mechanical factor in the producing cause, it is best to give less quantity of food having large residue and more having a smaller amount. When this condition exists, a full quantity of fluids, seventy to eighty ounces, should be taken in twenty-four hours. A tumblerful of water, in which one-half teaspoonful of table salt has been dissolved, taken in the morning, at least half an hour before breakfast, will help cure the case of constipation. The water without the salt taken at that time is also effective. Corn-meal made into mush, corn cakes or corn bread, also parched corn should be added to the other foods eaten to meet this trouble.

I agree with those physicians who believe that the urine of a pregnant woman should be occasionally examined for albumin, and when it has once been found in any case the amount of proteids given should be reduced and maintained at a minimum, even though it disappear. There is a predisposition to its recurrence. If severe, the diet should be exclusively milk, to be continued for two weeks after labor; if not severe, a small proportion of meat may be taken, also fruit and vegetables. Alcoholic beverages, all of them, should be prohibited.

The unaccountable craving for some special article of food that is met with in some pregnant women should be gratified to the extent of taking a reasonable amount. I do not wish to be understood as advising that a craving for albuminoids in those cases having nephritis, nor for carbohydrates in those having diabetes, nor in any other condition when the desire is manifestly due to some disease in which the article craved is clearly contra-indicated.

During labor, if it be of short duration, and the woman strong, food should not be given. If the woman be in a weakened condition, or if the labor be more than seven hours' duration, liquid food should be taken. Coffee, beef-broth, and milk are the best. The first two are stimulating in their effect, without any reaction. This advice, if followed, conserves the strength, lessens the danger of post-partum hemorrhage, and enables the patient to better endure the necessary assistance in difficult labors, and the immediate repair of lacerations. The ingestion of food during labor will relieve some cases of nausea.

The old theory that eating after labor will produce fever is erroneous. During the lying-in period the woman should receive food. She has much to do at this time. The discharge of lochia, repair of lacerations, beginning of uterine involution, change of colostrum to milk, secretion in sufficient quantity and quality to meet the necessities of the child are some of the physical demands which require for their accomplishment a force that is best obtained from a sufficient supply of proper food.

Marked beneficial results have been obtained by giving dry toast and a small cup of coffee or tea half an hour after completion of labor, especially if the patient be exhausted. For the first twenty-four hours after delivery the food should be largely liquid—broth, beef-tea, milk-toast, soft-boiled eggs, and plenty of pure water. Then, if she be in a normal condition, solid food sufficient to meet her desires should be allowed. If puerperal fever develops, the diet should be liquid, given according to rules for feeding in fevers.

During the nursing period all classes of food should be taken in the same proportion as in other healthful conditions. The quantity and quality of the milk is best maintained by keeping the system in a normal state, and not by the ingestion of any one article of diet or class of food. Of course, the food should be pure, taken regularly, and thoroughly masticated. Alcoholic beverages should not be allowed; they do not increase the quantity of milk any more than does water. The latter will not only increase the quantity but also the solid constituents of the milk.

I repeat, in closing, that it should be borne in mind that pregnancy, parturition, and lactation are not diseased conditions, and the woman should not be made ill by a restricted or abnormal dietary. If she has any disease, the diet suitable for it when the above conditions do not exist should be given.

Auto-Infection.

By Henry Edwin Spalding, M.D., Boston, Mass.

The knowledge gained during the last decade concerning sepsis, and the application of that knowledge to the discovery and use of means for attaining and maintaining asepsis, has very greatly lessened the dangers of parturition. This has been again and again proven by comparing voluminous statistics before the days of antiseptic proceedings with those of the last few years, when sepsis has been generally guarded against. These favorable results are shown not only in institutional but also in domiciliary practice. I will not detail them here, as to do so would be only rehearsing an old, oft-told tale. Such grand results must not for a moment be lost sight of, but it is quite possible that the intoxication of success may be leading the profession to ignore some factors in the problem that must be counted if its solution shall give, as a result, perfect asepsis.

Not long since, in a lecture before a society of Boston ladies devoted to the consideration of physiological subjects, a young physician, filled to overflowing with the latest lecture-room pabulum, made a statement like this: "With to-day's knowledge of sepsis and the use of antiseptics, the very simple fact that the patient has puerperal septicæmia convicts the attending physician of ignorance or neglect in a degree that should disqualify him for the practice of medicine." Of course, such a broad statement had, for the moment, its intended effect, and each woman mentally condemned this or that previously esteemed physician to the shades of desuetude. The chances are that when that young man meets the stern realities of obstetrical experience, the scriptural rebuke, "By your words ye are condemned," will rudely awaken him to see the absurd self-assurance that led to their use.

In bringing before you the subject of auto-infection, I would not be understood as discrediting in the least the wonderful results attained by the careful and effective use of antiseptic measures. I believe they are of inestimable value, and cannot be ignored in any degree. I would go a step farther. While guarding the citadel of vitality against the entrance of a foreign foe, I would closely scrutinize the forces within, lest they open the portals to the assailants, or themselves in concealed mutiny traitorously destroy it.

Since toxæmia in parturition is subject to the same laws as toxæmia in surgery, we may very properly look to surgical authorities and experiences for light in dealing with this subject. Roswell Park says: "One of the greatest advances made in recent pathology has been the

establishment of the fact that a great many of the morbid conditions from which the human race suffers are those due to causes arising entirely from within their own systems." Again, "I have long maintained that many surgical patients present forms of blood poisoning in which the poison has not proceeded from the wound."

Indeed, Genzmer and Volkman have asserted that there is such a thing as an aseptic surgical fever, due to the absorption of the products of normal tissue-changes at the site of injury.

Dr. E. S. Jackson says: "We cannot expect to classify the various types of puerperal fevers until we can classify the various causative bacteria." He insists that because the vagina contains these bacteria before labor, we must recognize auto-infection as one of the causes. Among the many others who recognize the fact of auto-infection are Barnes, in a recent paper before the British Medical Society; Henroty, Barton, C. Hirst, and Lusk.

Within the limits prescribed to papers in this convention, it is impossible to do more than briefly mention some of the most conspicuous facts pertaining to the subject.

The intestinal tract may be the source of systemic infection from:

1. Unexpelled normal excrementitious matters.
2. Ptomaïnes.
3. Pathogenic bacilli.

That fecal matter contains substances of marked toxic powers has been amply proven by practical observation, and experimental research has shown that excretive and other undefined substances that await investigation are highly toxic. The toxicity of putrid matter stands undoubted, and yet an extract made of putrid matter is much less toxic than one made of fecal matter. The products of liver action are in greater part eliminated through the intestinal canal. By his liver man forms enough poison in eight hours to kill him. These substances unduly detained in the intestinal canal are taken up by the absorbents and produce systemic poisoning, which may be not only serious in itself, but so weakens the vitality that the resistance to the assaults of toxic germs that may find their way through some open door is ineffectual, and sapræmia, septicæmia, or even pyæmia may result.

The more acute form of intestinal toxæmia arising from ptomaïnes or leucomaines, violent in itself, destroys systemic resistance to attacks of pyogenetic and other bacilli.

What more interests us here is the fact that the intestinal canal, in its entire length, swarms with bacteria of various kinds, which, under favoring conditions, raid upon the interior of the body. A local injury or simple inflammation may furnish a lodging place for these wandering organisms and establish a focus of infective inflammation which shall result in a systemic toxæmia. Park says: "The ease with which the colon bacillus passes through the coats of the intestine which has been in the slightest degree disturbed or abraded is remarkable." "Without the existence of recognizable lesions, these bacteria sometimes emigrate, and perhaps enter the circulation."

If this condition is an ever-present menace to successful results in general surgery, it must be much more so in parturition. Here the resisting powers are often weakened by disturbed renal or hepatic functions; the blood is so changed by gestation that at other times the condition might be termed pathological; and then follows the still further devitalization from exhaustion incident to labor, and we have conditions most favorable to the invasion of toxic germs. Add to this an intestinal toxæmia producing a condition of sapræmia, as above demonstrated, and we have a condition most favorable for the working of pathogenetic bacilli. It needs only such a contusion or abrasion of the rectal surfaces, as often attend difficult deliveries, to invite a condition of fully developed septicæmia or pyæmia.

Septic infection sometimes manifests itself before the onset of labor. I cannot better describe this condition than by briefly reporting an illustrative case from my private practice. Mrs. —— had passed through gestation in a perfectly normal manner, as she had done in two previous pregnancies. The day of expected delivery was at hand. For twenty-four hours there had been a free, bloody leucorrhæa. She had no pains, and she seemed in perfect health. She was awakened during the night with a severe chill, intense headache, pains all over, and nausea. Temperature immediately rose to 103.5°, pulse 120. The chill was followed by free perspiration, without, however, giving much relief. Her face was dark, congested, and expressionless, except from the look of suffering. The least effort of moving or being moved increased her discomfort. In about twelve hours labor pains came on, and fortunately she had a quick delivery. She flowed freely, but not to a great excess. The child was robust, and a careful examination of the placenta showed no signs of degeneration or other abnormality. In two days the fever had practically gone, and she went through an uneventful recovery. In the absence of any renal or systemic disturbances, I believe that here was a case of sapræmia, or possible septicæmia, the bacilli having entered through the vaginal canal to the cervix, where the process of dilatation had caused a breach of continuity of surface, as indicated by the free bloody discharge during the previous hours.

Most modern bacteriologists, like Bumm and Boderlein, claim that auto-infection can develop nothing more than a condition of sapræmia, and that pathogenetic cocci are not found in the healthy vagina or cervix. They acknowledge, however, that as soon as the normal healthy vaginal secretion becomes alkaline, which may easily happen from admixture with the cervical secretions, it becomes a most favorable culture medium for pyogenic staphylococci and streptococci, and auto-infection becomes possible. On the other hand, Mironow, with others, claims to have demonstrated the presence of streptococci and staphylococci in the vaginæ of healthy pregnant and puerperal women. When we remember that there are absolutely few healthy vaginæ, we must recognize the danger from this source.

Remy claims that the meconium is a source of puerperal infection.

If it becomes mixed with the liquor amnii, the uterine cavity will be soiled. This fluid decomposes rapidly. On the other hand, it is generally claimed that the meconium in the new-born child is free from bacteria, but rapidly becomes infected by them. This being the case, it is not the meconium that is the offending cause, but it offers a fertile soil for the growth of toxic germs.

The most frequent site of septic infection in the puerperium is doubtless the intra-uterine surface represented by the area of placental attachment. The uterine sinuses are plugged by thrombi, which, if the uterus be not firmly contracted, may extend well into the uterine musculosa. Thrombi are of themselves innocuous, and are cast away with other uterine detritus in the form of lochiæ. But let putrefaction take place from contact with pyogenic bacilli, by absorption we get a condition of sapræmia, or the bacilli themselves with the decomposing clot may be taken from the sinuses into the circulation, giving complete septicæmia or pyæmia. The pyogenic cocci that thus infect the thrombi may come from the vagina, from some suppurating disease, like cancer of the uterus or its appendages, and most frequently of all from a pus tube. In the absence of statistical proofs, I believe that ninety per cent. of all cases of auto-infection come from this last source, and that of all cases of puerperal septicæmia a large portion are infected in like manner.

When we consider how large a part of the work of gynecologists is the treatment of pyosalpinx, or troubles in which this forms a conspicuous part, we can readily comprehend the dangers from this source. The astounding statement is made that in New York City and France eighty per cent. of the men have at some period of life been affected with gonorrhœa, and ninety per cent. so afflicted remain uncured; and of women who married these victims of gonorrhœa, scarcely ten per cent. remained well. This means that many of these unfortunate wives go through the stages of vaginitis, cervicitis, and endometritis, and the inflammation then enters the fallopian tubes, and pyosalpinx results. If both tubes are involved, conception will not likely occur. If, however, but one tube is affected, conception is possible, and she is exposed to one of the greatest dangers of parturition.

Uterine Inertia and Oxytocics.

By A. W. Blunt, M.D., Clinton, Ia.

"Be fruitful and multiply" was a divine command given at the dawn of humanity. If this is still to be heeded in modern times, and the curse, "In sorrow shalt thou bring forth children," be removed, it is our privilege and prerogative as progressive physicians to render these possible, and through our science and art make gestation, from beginning to end, devoid of all preventable pain and danger, both to mother and child.

During a practice of over twenty years I have been especially interested along this line of professional work and led to study carefully and clinically certain phases of obstetrics bearing intimately on our present topic.

Realizing first that uterine inertia is a special manifestation of deficient or dormant nerve force in a particular organ, we can better apply our remedies if we determine some of the essential and underlying causes leading up to it, and through proper prophylaxis make the results obtained still more valuable.

If first called while our patient is in the throes of puerperal eclampsia, we realize vividly what tremendous energy is going to waste, an exhibition of strength even in the weakest subject, which, if exerted in the right way and direction, would be capable of carrying her through any number of childbirths.

Aware that the sympathetic system is the great storage battery of nerve power, whose errant forces may manifest themselves in countless reflexes, our endeavor must be to keep the circuit free and connections unbroken to every part dependent on it, so that at the proper time everything may work in harmony and no reaction follow that cannot be readily and easily controlled.

Inheriting a highly sensitive organization, the girl of to-day, owing to false systems of education at home and school, may easily develop faults of nerve action that, if not corrected, have a permanent influence. The failure, especially at puberty, on the part of parents and guardians to recognize properly temperament and tendency, and provide for the newly-awakened functional activity adequate safeguards and medical advice, is responsible for much of the pain and suffering of after years.

The intense strain on the woman in society often exhausts vital force and brings with it an attendant train of ills that, in their effect on the uterus and nervous system, render her incapable of the high mission of motherhood.

All these adverse forces in the exercise of our calling we shall have

to meet, and endeavor to make the community realize how much depends upon our skill and foreknowledge in securing for each individual case the appropriate treatment and immunity from suffering.

We shall find in hygiene and sanitary science important allies in securing muscular development and equipose of nerve force during the preparatory stage.

The selection of remedies according to indications will be of valuable service in many cases. I mention a few that I use most frequently. Cimicifuga, acting so markedly upon the cerebro-spinal nervous system, exerts direct control over many of the reflexes so annoying in the early months. Toward the latter part, also, I often give it as a preparatory remedy with a great deal of confidence.

Caulophyllum is a close analogue, and is to be thought of where the pains simulate those of true labor. In rheumatic patients it is especially indicated.

Pulsatilla should not be forgotten as a reinforcer of muscular tissue, particularly in those of its characteristic temperament.

Helonias is our vegetable iron, and is to be given where signs of anæmia are manifest. Where the appetite and assimilation are poor, with general weakness and debility, Strych. phos. 2x, after meals, has made a decided change in many of my patients.

When all that can be has been done, and the expected time arrives, we should be on the lookout for any signs of inertia or faulty nerve-action. Where the pains do not progress steadily and uniformly, it should be determined whether there is any mechanical obstacle to delivery, adhesions or rigidity of the os. Hydramnios or excessive uterine retraction may also be a cause of the inertia. In fact, as complete a diagnosis as possible should be made of the actual condition and state of the patient and surroundings.

In primiparæ no one expects as rapid progress, and a certain amount of delay incident to the first stage should not make us too anxious to hurry it along, preferring to hasten slowly for the sake of the soft parts.

As it is in multiparæ that we are more apt to meet with inertia per se, our oxytocic measures and remedies find a wide field, and the use of every adjuvant compatible with the safety and comfort of our patient is certainly legitimate midwifery. Hot cervical douches, sitz-baths, or even hot wet-pack, have their time and place in relaxing tissues and calming nervous irritability.

We may speak in passing of rectal injections, of glycerine to clear the bowel, and also for some slight oxytocic effect.

In the second stage the vis-a-tergo may be aided by manual pressure or resort to changes of position, particularly the kneeling posture, will often excite or renew action.

The list of remedies with special symptoms is rather long, but I find more frequent use for Caulophyllum or Cimicifuga in the aggravating, teasing pains at the beginning; Belladonna for spasmodic closure of the os; Gelsemium atony with widely dilated os; Ipecac or Tartar emetic where nausea or vomiting are present.

But first and foremost among the oxytocic remedies that I have learned to rely upon for several years, is Strychnia administered hypodermically. As stated by one author, "Strychnia has a more powerful influence over the nervous system than any drug in the Materia Medica." It produces by reflex action contraction of the capillary system and of unstriped fibres. The tissues become pale and have their temperature and blood-supply lowered. The effect of large doses in producing spasm might lead us to believe that it would act according to our law of Similia, and, given in proper doses, be capable of converting inefficient and intermittent uterine action into one regular and normal in character. My experience with it in a large number of cases has led me to take this view of it, and the longer I use it the more thoroughly I am convinced that it covers the phenomena of labor better than anything else I have ever used, especially from the beginning of the second stage to the close of the third. I have watched carefully for any untoward effects, but have failed to find any, even in a single instance. Particularly in cases of multiparæ I now go with more confidence in my ability to overcome depression and inertia, and shorten the duration of labor. Used after the membranes have been ruptured, its power over the muscular tissue of the uterus is not long in asserting itself. In twin labors, inefficiency of action is a frequent complication; here it is a friend in need. Two particular illustrations of this occurred recently. A lady called on me shortly before her confinement, stating that previous labors had been very lingering and accompanied in every instance by severe hemorrhage, several times narrowly escaping death. This being her sixth pregnancy, she was very apprehensive on account of increased size and greater debility than ever before. I gave her Cimicifuga, 2x before, and Strych. phos. 3x after meals. In about two weeks labor came on, and I delivered her of six-pound twins. The pains seemed weak and irregular at first, and she was quite low-spirited; one-thirtieth of a grain of Strychnia, hypodermically, made a perceptible change in both conditions, and further on another similar dose completed the work. She lost very little blood, and made a quick, uncomplicated recovery.

In another case of twins, labor occurred at the eighth month, the fourth within six years. There was marked inertia and aggravating pains felt almost entirely in the left groin. After rupturing the membranes I gave a hypodermic of Strychnia, and within an hour both children were born. The mother said she felt stronger than after the previous times. All have continued to do well.

Within the last two months I have used it with two primiparæ, aged twenty-nine and thirty-five respectively. Both had marked swelling of face and limbs, with fifty per cent. of albumin in urine at the time of confinement, yet both went through in a normal way. The Strychnia, beside regulating the pains, acted as a diuretic also, and the œdema rapidly subsided.

In a recent case also of puerperal eclampsia, I had a happy experience with it. Was called in consultation where the physician had been

in attendance constantly for over twelve hours. Found a primipara seven months along whom he stated had had sixteen convulsions of the severest type during his stay, and another occurring soon after my arrival showed me clearly their nature and gravity. She had been unconscious for hours, and the little urine that could be drawn was solid albumin. On examination I found the os but little dilated and no other signs of labor. We decided that her only salvation was to bring this about, and I suggested the use of Strychnia. Her previous treatment had been injections of morphia with inhalation of chloroform, also Veratrum viride when she could swallow anything. Strychnia, one-thirtieth of a grain, hypodermically, was given; two hours elapsed before another spasm, this much lighter than the others. In the meantime there was some indication of uterine activity, and the os about one-half dilated. I ruptured the membranes, gave another injection of Strychnia. The pains grew harder almost immediately; there were no more convulsions, and in less than two hours the child was born. She did not regain consciousness until next day, but her recovery was rapid and uneventful.

The only puerperal case I have ever lost, a primipara, thirty-eight years old, was from this cause, and while the results might not have been any different, as I look back on it now, nearly ten years, I only wish I had known the value of Strychnia.

In the third stage of labor, when we fear inertia that may result in hemorrhage, I have found it invaluable. Given during the second stage, the action is prolonged into the subsequent one. I have not had a case of retained or even delayed placenta since using it. The womb contracts promptly, and the pressure and kneading formerly practised so invariably, I no longer find necessary. Very little blood is lost, and so much strength saved for the puerperium.

Chloroform may be considered as an oxytocic, at least indirectly. This I administer in nearly every case, never omitting it in primiparæ in the latter part of the second stage. Its relaxing and soothing effects are too well known to need any comments. I find it works well in conjunction with the Strychnia, that if in any case the action of the latter should be to produce too severe contraction, which is very seldom, the chloroform can be used in such a way as to control them nicely, with no danger of heart failure.

I have less use for the forceps than formerly, although when occasion calls, they become an oxytocic aid we could not well dispense with.

In conclusion I will sum up the principal points I would make in regard to Strychnia.

1st. It should be used hypodermically, thus insuring prompt effect.

2d. Its action is homœopathic to the phenomena of labor.

3d. It shortens the duration, especially of the second and third stages.

4th. The placenta is quickly and easily expelled.

5th. Post-partum hemorrhage is reduced to a minimum.

6th. Secures prompt involution.
7th. Acts as a diuretic.
8th. Reduces temperature.
9th. Renders condition of patient stronger after labor, thus insuring more rapid recovery.

I hope that others have had an experience similar to mine, and can testify to its virtues in these conditions. Though we may not understand everything about its action, yet, like Galileo's world and the principles of our own Homœopathy, "It does move."

REPORT

OF THE

MATERIA MEDICA CONFERENCE.

The Materia Medica Conference was held at Creighton Medical College, Omaha, Neb., at 2 P.M., Thursday, June 23, 1898.

W. A. Dewey, M.D., the Secretary of the Conference Committee, called the session to order, and read the programme, as published, and also a telegram from the chairman, stating his inability to be present. As his paper, which was the only one on the programme, was not sent, and as the Conference would, therefore, have to consider new matter, Dr. Pemberton Dudley was called to the chair.

The following questions were more or less discussed by the Conference:

1. Can the law of similars ever demonstrate its full therapeutic powers with a materia medica constructed on lines heretofore followed?

2. What have been the chief errors in the mode of constructing the present materia medica?

3. In what particulars has the proving of drugs deviated from the rules laid down by Hahnemann in the "Organon?"

4. In what particulars do Hahnemann's rules and directions for proving drugs differ from, or fall short of, those required by the methods and precautions of modern scientific research?

5. In the proving of any drug, is the preliminary experiment suggested in Section 130 of the "Organon" essential to the correctness or completeness of the work?

6. What evidences should be demanded as necessary to establish the genuineness of a drug-symptom, or of the symptoms obtained by an individual prover?

7. Is clinical testimony to the genuineness of an alleged drug-symptom ever admissible as a substitute for pathogenetic evidence; and, if so, under what rules and restrictions?

8. Does a limited susceptibility in the pathogenetic action of a drug indicate a corresponding limit to its therapeutic action in the same person? If so, should not symptoms obtained from but few provers be distinguished from those obtained from the many?

9. What therapeutic reasons are there for distinguishing the direct effects from the counter-effects of drugs?

10. Should not the medical profession adopt measures to guard the purity of our recognized materia medica against the unauthorized introduction of unreliable material by irresponsible persons?

11. Until these and other questions have been thoroughly considered, and if possible solved, is it expedient that the profession should undertake the radical improvement or reconstruction of the materia medica?

Discussions: H. C. Allen, M.D., Eldridge C. Price, M.D., George Royal, M.D., H. W. Pierson, M.D., Charles E. Fisher, M.D., J. L. Hanchett, M.D., T. C. Duncan, M.D., George B. Peck, M.D., William E. Leonard, M.D., Pemberton Dudley, M.D., H. P. Holmes, M.D.

STATISTICS.

Statistics, New and Old.

By George B. Peck, M.D., Providence, R. I.

Medical statistics may be arranged under two titles, general and special. The latter should contain only figures relating to particular specified diseases or injuries; the former can receive all others. The first are valuable chiefly on hygienic grounds, the second on therapeutic or operative, though each may be available as side-lights for purposes foreign to the original intent. Too many new-school men have kept their records even to date, according to some *general* system, thereby almost absolutely wasting their time, their paper, and their strength. Hereafter let each one, especially if in charge of institutional work, specialize his reports, or else discontinue them altogether.

Of general statistics, but few will be noted. By order of the Czar, in 1829, Dr. Herrmann, then attending a Russian nobleman, was assigned to the charge of wards at Tulczyn, in Podolia, for one hundred days, for the purpose of demonstrating the efficiency of "new physic." One hundred and sixty patients were admitted, of whom 141 were cured, 6 died, and 18 suffering from incurable organic defects, that had been treated in other hospitals, remained on hand. The death-rate was 3.64 per cent. The result was so satisfactory that in the following winter, 1829-30, by the same authority, Dr. Herrmann treated at an Infantry Hospital at St. Petersburg 409 persons, of whom 370 were cured, 7 were relieved, 4 not cured, and 16 died, while 12 were under treatment at the expiration of his service. This time his mortality was a trifle higher, 3.92 per cent.; yet it must have been far lower than in kindred institutions, for in 1837, at a very orthodox hospital in the same city, where 3,356 persons were treated, 773, or 23.03 per cent., died, while 322 remained in the wards, and only 2,261 recovered. No additional experiments were made, however, for reasons identical with those that have thwarted so many political reforms in that alleged autocracy.

At the Hospital St. Marguerite of Paris, during the years 1849, 1850, and 1851, one-half the beds (100) were under the care of Dr. Tessier, the other half (99 beds) were in charge of regular practitioners. The former received 4,663 cases and lost 399, or 8.5 per cent.; the latter received 3,724 cases and lost 411, or 11.3 per cent. That Dr.

Tessier should treat 939, or 25.2 per cent., more cases than his rivals in the same length of time, with but a single additional bed, proves he needed for the establishment of convalescence less than three-quarters the time required by his allopathic colleagues. Furthermore, the cost of the drugs used by the latter was 23,522 francs; by the former, between two and three hundred francs, or about a hundredth part—rather an important item in economics. The Administration des Hôpitaux published these figures, and added: "We would encourage him to persevere in his efforts, which can only benefit humanity." As the Administration assigns patients only as beds become vacant, selection on the part of the attending physicians was precluded.

Very like the testimony of this board was that of the Board at Thoissey, Department Aisne, where Dr. Gastier had charge of the hospital of that place from 1832 to 1848. An allopathic physician at Mâson, on one occasion stated, in a political paper of that city, that the Administration of this hospital had forbidden the doctor to practise Homœopathy within its walls. Thereupon, over their own signatures, the Board declared that "since the accession of Dr. Gastier the number of deaths, in proportion to the number of cases, has been much less than ever before; that the cost of medicine has been almost *nil*, and that the service has been sensibly relieved by simplicity and regularity."

At the Homœopathic Hospital of the Sisters of Mercy in Vienna there were admitted, from 1833 to 1841, 5,161 persons, of whom 4,710 were cured, 89 were discharged uncured, 61 were remaining in the wards at the close of the period, 34 were brought in moribund, and 267 others died. The total death-rate was 5.83 per cent., but if the moribund be excluded from the calculation, it was but 5.21 per cent. At the General Hospital of the same city in 1838 there were 20,545 patients, of whom 2,678 died, or 13.03 per cent., and in 1841 there were 24,258, with 3,068 deaths, or 12.65 per cent.

In reference to the matter of general expense it is instructive to note that while in 1840 the Administration of General Charity in Berlin set down the daily cost of one patient as twenty-two and one-half cents (7½ groschen), the cost of the daily support of patients in the homœopathic stationary clinic was eleven cents (3 2-3 groschen); also that in 1848 in Vienna a patient cost seventeen and a half kreuzers more a day in the allopathic than in the homœopathic hospitals.

It chances that certain disorders to which the human race is prone are so virulent, that all civilized governments take most careful cognizance even of their apprehended presence. Not a single case can escape the scrutiny of the public health officials. Fraudulent returns concerning such diseases are simply impossible. But it is in direct contest with these dread infections and under such conditions that Homœopathy has achieved its most signal triumphs. Most terrific of all is yellow fever. Dr. La Roche, in his exhaustive treatise (allopathic) on this disorder, which occupies two volumes of 1,400 pages each, and is a deservedly recognized authority on the subject, states that the

average death-rate is 100 out of every 350 attacked, 2 out of every 7, or 28.57 per cent. But in the epidemic of 1853-54-55 at New Orleans, Drs. F. A. W. Davis and W. H. Holcombe treated 1,016 cases, with but 55 deaths—19 out of every 350, 2 out of every 37, or 5.41 per cent., and in the same city, during the epidemic of 1878, of 1,945 cases treated homœopathically but 110 were lost, 20 out of every 350, 2 out of every 35, or 5.66 per cent., while outside New Orleans, in the same epidemic, 1,969 cases were treated, with 151 deaths, 26 out of 350, 2 out of every 26, or 7.67 per cent. On the same ground and during the same epidemic the most favorable allopathic mortality was 17 per cent., while in many places it was very much higher. Furthermore, at Portsmouth and Norfolk, Va., in 1855, Dr. Lisle Augustus Bilisoly treated 137 cases with a loss of 8, 20 out of 350, 2 out of 35, or 5.84 per cent. But five of these eight had previously been under allopathic treatment, occasioning, at the mildest estimate, loss of much valuable time.

Scarcely less feared by the common people is Asiatic cholera. Immediately after the epidemic of 1830-31, the president of the Imperial Council of Russia reported that in the governments of Saratow, Tambow, and Twer 1,273 persons had been treated homœopathically for this disease, of whom 108, or 8.48 per cent., died. At the Cholera Hospital, St. Petersburg, 636 were *regularly* treated by Dr. Lichtenstadt, with a loss of 317, or 49.69 per cent. But lest it be objected that the virulence of the infection varies with the location, it may be added that at Wishney, Wototschok, Russia, of 199 regularly treated for this disorder, 139, or 69.8 per cent., died, while of 109 treated at the same time and place by Dr. Scider, homœopathically, but 23, or 21.1 per cent., were lost.

In 1831 Dr. Quin visited Tischnowitz, Moravia, when more than one-tenth of the entire population was attacked by cholera. Of these, 331 were treated allopathically, with 140 deaths, 42.29 per cent.; 71 by camphor only, with 11 deaths, 15.49 per cent.; and 278 homœopathically, with 27 deaths, 9.71 per cent. These facts were collated by the authorities and attested by the chief magistrate.

In April, 1832, Dr. Rath was ordered by the King of Bavaria to collect authentic information as to the results of the homœopathic treatment of this disorder. He reported that out of 1,269 cases treated by fourteen homœopathic physicians in Vienna, Prague, Hungary, and Moravia there were only 85 deaths, a mortality of 6.69 per cent.; while the allopathic death-rate in the same places was about 31 per cent.

Sir William Wilde, an eminent English ophthalmologist, in a work entitled "Austria and its Institutions," states that during the epidemic of 1836 the Leopoldstadt hospital, under the care of Dr. Fleischmann, was ordered to be fitted up for cholera patients. A comparison of results at the close of the season showed that while two-thirds of his patients recovered, in other hospitals two-thirds died. This secured the repeal of a previous edict, more honored in the breach than in the observance, however, prohibiting the practice of Homœopathy in the empire.

In 1846, at the Homœopathic Cholera Hospital at Munich, 242 persons were treated, of whom 223 recovered, 13 were relieved, and 6 died (2.48 per cent.).

In 1848 the six physicians of the Edinburgh Homœopathic Dispensary attended 236 patients at their own homes, of whom 57 died, 24.15 per cent., while in the same city and during the same epidemic 640 cases were treated by allopathic physicians, of whom 435, or 67.97 per cent., perished.

In 1849, Drs. Pulte and Ehrmann, between May 1st and August 1st, treated at Cincinnati, O., 1,116 cases, with a loss of but 35 patients (3.14 per cent.). So great was the contrast of their results with those of their allopathic neighbors that their veracity was publicly questioned. The doctors promptly submitted their lists, and visitation at the indicated residences substantiated the fact.

In Liverpool in 1849, of 179 persons treated homœopathically, 45 died, or 25.14 per cent., while the general mortality was 46 per cent.

The General Returns to Parliament admitted a mortality in London in 1854 of 59.2 per cent. from cholera, while the returns of the Homœopathic Hospital, certified to as correct by Dr. Macloughlin, Medical Inspector of the General Board of Health, indicated a loss of but 16.4 per cent. The same year, in Naples, Dr. Rubini attended 377 cases without a single death. Two hundred of these were in a single institution. Other Homœopathists attended 215 additional cases with equal success. Similar results attended the labors of Dr. Alexander Thompson Bull, at London, Ontario, Canada, with 53 cases, the first of which was in the family of his Honor the Mayor, Marcus Holmes. This also occurred in 1854.

In 1884, by the attachés of the Homœopathic Dispensary at Naples, Italy, 83 cases were treated with camphor alone, with 3 deaths, or 3.61 per cent., while the average mortality in that country, as well as in France and Spain, was over 70 per cent. Even in the United States the mortality during the last epidemic, 1873, was, according to the government statistics, 52 per cent., which is more than double the least successful homœopathic treatment on record.

Diphtheria ranks third as a terrorizing disease. While all persons are obnoxious to its attacks, children are especially prone to its visitations. During the past twenty-three years, 102 cases have occurred at the Tobey Street Home of Providence, R. I., 3 of which (2.94 per cent.) proved fatal. The diagnosis in each of the 36 cases in the last epidemic was verified by the culture-test; that in the preceding one of 40 cases was confirmed by a special inspection by the city superintendent of health, Dr. C. V. Chapin. Strickler states that the Homœopaths of sixteen cities reported, in 1890-92, a loss of 347 diphtheria patients out of 1,141, or 30.41 per cent.; while the allopaths lost 2,996 out of 8,765, or 34.07 per cent.; also that in 1893 the former lost in eleven cities 110 cases out of 376, or 29.26 per cent., while the latter lost 965 out of 2,917, or 33.09 per cent. The most potent cause of this great discrepancy between the institutional and the general death-

rate is that very many physicians *will not* subject their patrons to the annoyance of semi-quarantine, unless the possibility of serious consequences is clearly manifest.

Dreaded almost as much as the preceding disorder is scarlatina. The Protestant Half Orphan Asylum of New York City reports that between 1842 and 1852 it had 58 cases, 5 of which were lost through ensuing dropsy, and that 70 have been treated since 1874 by Dr. Woodward, who saved all but one. Its total is, therefore, 128 cases and 6 deaths, 4.69 per cent. The Tobey Street Home reports 114 cases with 6 deaths also, 5.26 per cent. According to Strickler, in seventeen cities in 1890-92 the Homœopaths lost 157 out of 3,039 cases, or 5.16 per cent., and the Regulars 1,466 out of 17,340, or 8.45 per cent., while in 1893, in ten cities, the former lost 30 out of 693 cases, 4.33 per cent., and the latter 343 out of 4,056 cases, 8.46 per cent. Moreover, eminent allopathic authorities report the following death-rates: of persons under twelve, Fleischmann, 30.72 per cent., and Krauss, 18.23 per cent.; under fifteen, Resigger, 16.06 per cent.; under sixteen, Voit, 12.50 per cent. Moreover, in the Manchester (England) Children's Hospital the mortality for ten years, 1877-87, was 11.8 per cent., while Collie states that in 10,000 cases of all ages the death-rate was 12.5 per cent., while between three and four it was 25 per cent.

Brief reference will be made to a few other disorders. Of measles, the New York Asylum reports 342 cases with 3 deaths (2 from pneumonia and 1 from acute laryngeal phthisis), a rate of 0.87 per cent.; while the Home had 129 cases, with no pronounced evil result. Combining, we have 471 cases with a loss of 3, 0.64 per cent., precisely the homœopathic death-rate given by Strickler for eight cities in 1890-92, where only 7 were lost out of 1,098; while the allopaths lost 297 out of 8,594, or 3.43 per cent. Climatic conditions were unfavorable in 1893, for in nine cities the former lost 14 out of 388 cases, 3.67 per cent., while the latter lost 302 out of 4,385, or 6.89 per cent.

Variola visited 46 persons at the New York Asylum in the decade 1842-52, but removed none. It had called around previously in 1837, when it was under allopathic control, and removed 2 of the 15 children it tarried with, 13.33 per cent. There have been 85 cases of pneumonia at the asylum, with 2 deaths, a loss of 2.35 per cent. Baginsky observed 60 cases, one-half in children under two years, 4 of which, 6.67 per cent., were fatal, and 9 were not followed. The asylum also reports 181 cases of whooping-cough without loss, while the allopathic death-rate is said to be from 3 per cent. to 15 per cent.

No class of human beings appeal more strongly to the consideration of the true physician than pregnant women. In the welfare of one the lives of at least two immortal beings are involved. To what extent has Homœopathy proved a blessing to their disorders? Let the following experience of members of the American Institute prove sufficient answer:

With Charpentier, the Institute has found that the influence of hysteria and epilepsy on pregnancy is practically *nil*, but while he

states chorea produces from 33 per cent. to 58 per cent. of miscarriages and premature births and slays from 29 per cent. to 35 per cent. of the mothers, our practitioners have met with no loss. More recently, Barnes has reported the allopathic maternal loss as 29 per cent., and an infantile loss of not less than 44 per cent.

Cardiac difficulties have occasioned us but an infantile mortality, and that of 25 per cent. Porak gives the *maternal* mortality as 38 per cent., of whom one-sixth were undelivered. He states that less than 58.2 per cent. went to term.

Measles are conceded to be innocuous to gravid women, but while we lose one-quarter of the offspring, Bourgeois and Levret state abortion and premature births occur almost always, while Klotz definitely specifies 82 per cent.

"Scarlatina," Charpentier affirms, "terminates in abortion in the case of every woman, in death in the majority." Olshausen states the mortality in cases that came to his knowledge prior to 1876 to be 48 per cent. Braxton Hicks reports 37 cases with 27 deaths, or 73 per cent.; Myers, 18 with 1 death, 5.55 per cent.; Boxall, 16, with no death, and Legendre, 23, without loss. Their average total mortality is 40.35 per cent. Our own loss is 9 per cent. of the mothers and 18 per cent. of the offspring. When it occurred in the puerperal state our loss was 62 per cent., Olshausen's 75 per cent.

Mayer reports two series of cases of variola in the *enceinte*, in one of which 17.2 per cent. of the mothers died, 31 per cent. aborting, and in the other 38.2 per cent. died, while 46.8 per cent. abòrted. Our maternal loss is 15.39 per cent., our fœtal, 46.15 per cent.

Respectable Homœopathists do not lose more than 12 per cent. of their pregnant typhoid patients and only 24 per cent. of the offspring. Charpentier reports 52.8 per cent. of miscarriages and 4 per cent. of premature births. On reckoning the slight chances of survival in the latter class the total infantile mortality is at least 55 per cent., and more probably 56 per cent. He naïvely adds: "The prognosis as regards the mother is more favorable." It is to be hoped it is!

Malaria has not been provocative of serious consequences to the *enceinte* when treated homœopathically. Charpentier states that pregnancy is interrupted in 41.3 per cent. of such women when suffering from this disorder.

Pneumonia occasions death in 14.28 per cent. of those attacked in the class of women under consideration, and an equal loss of offspring, although there are not by any means always two deaths in a single case. Rican's figures are 27.90 per cent. and 48.84 per cent., respectively; Chatelain's, 51.28 per cent. and 48.72 per cent., and Matton's, 26.32 per cent. and 47.37 per cent., or a general rate of 35 per cent. and 48.33 per cent.

Of consumptives who become pregnant we lose 25 per cent. within a year, and 13 per cent. of the children die within a corresponding period, but 50 per cent. will attain middle life. In Europe the maternal loss is 64 per cent., while 23 per cent. of the children died of

tuberculosis alone before their seventh year, and only 37.50 per cent. maintained good health.

In puerperal eclampsia Hecker says the mortality is 27 per cent.; Dohm, 29 per cent.; Hugenberger, 35.1 per cent.; Löhlein, 37.7 per cent., and Depaul, 37.88 per cent. We have lost 22.33 per cent.

NOTE.—During an epidemic of typhoid fever at Stamford, Ct., in the spring of 1895, allopathic physicians treated 284 cases, with 22 deaths, a mortality of 7.74 per cent.; while homœopathic physicians treated 122 cases, with only 5 deaths, a mortality of 4.09 per cent. In New Haven, in the same State, during the years 1891-95, allopaths treated 458 cases of the same disease, and supplied 119 graves with occupants, a loss of 25.98 per cent.; the Homœopaths treated 60 cases, and filled but 12 graves, losing but 20 per cent.

Of diphtheria and membranous croup, the former cared for 753 cases, with 267 deaths, 35.45 per cent.; the latter, 146 cases, with 31 deaths, 21.23 per cent.

Regular practitioners looked after 1,271 cases of scarlatina, but lost 127, or 9.99 per cent., while homœopathic doctors watched over 209 and lost 7, or 4.30 per cent. Measles was given as the cause of death in 51 cases out of 286 allopathically treated, 17.83 per cent., and in 2 only of 106 homœopathically treated, 1.88 per cent.

Comparative Vital Statistics.

By David A. Strickler, M.D., Denver, Col.

In presenting this, my third and last report on comparative vital statistics to this honorable body, I am but supplementing the work before reported, and following the same lines then laid down. To do otherwise might imply a change of method to suit data on hand, which is far from our purpose in this work.

I very much regret that my last report was not printed in full in the Transactions of the Institute, since the tables alone are not easily comprehended.

In this report three sets of tables are given, the first set of nine tables gives the work of 1894, the second set the work of 1895, and the third set is a summary of all the work done in the different cities for the past five years.

Philadelphia was reported for 1892 by Dr. H. L. Northrop; St. Louis, for 1892, by Dr. C. M. Ustick; Brooklyn, for the first three months of 1894, by Dr. Edwin R. Bedford; Baltimore, from 1891 to 1895, inclusive, by Dr. W. Dulaney Thomas; San Francisco, for 1892, by Dr. Hayes C. French; Cincinnati, from 1892 to 1894, inclusive, by Dr. A. E. Goldsmith of Home City, O.; Detroit, for 1891 and 1892, by Dr. Rollin H. Stevens; for 1894 and 1895, by Dr. R. Milton Richards; Minneapolis, for 1891, 1892, and 1893, by Dr. William E. Leonard; Rochester, from 1892 to 1895, inclusive, by Dr. H. W. Hoyt; St. Paul, from 1890 to 1893, inclusive, by myself; for 1894 and 1895, by Dr. W. A. Beach; Kansas City, for 1891 to 1893, inclusive, by Dr. S. C. Delap; Providence, for 1891 to 1895, inclusive, by Dr. George B. Peck; Denver, for 1891 to 1893, inclusive, by Dr. J. M. Walker; for 1894 and 1895, by myself; Indianapolis, for 1891 to 1893, inclusive, by Drs. O. S. and Sollis Runnels; for 1894 and 1895, by Drs. Sollis Runnels and H. Allen Adams; Allegheny, for 1892 and 1893, by J. Richey Horner; Syracuse, for 1892, by Dr. E. E. Keeler; for 1893, by Drs. C. D. Hale and B. W. Sherwood; for 1894, by Drs. Clarence Edwin Stephens and George L. Gridley; Nashville, for 1890 to 1894, inclusive, by Dr. B. H. Enloe; Dayton, for 1892, by Dr. Frank D. Bittinger; Duluth, for 1891 and 1892, by Dr. F. C. Bowman; for 1895, by Dr. W. W. Routh; Seattle, for 1892 to 1894, inclusive, by Dr. E. Weldon Young, and Lincoln, for 1892, by Dr. Benjamin F. Bailey.

The amount of labor required in collecting the data herewith submitted was very great, and the Institute owes a debt of gratitude to the men in the different cities who made it possible to present this report, so flattering to the homœopathic school of medicine. I take pleasure in personally thanking them, one and all, for their timely and efficient service in this great and important work.

The results are given in a series of tables, which I now submit:

TABLE I.—MEASLES.

Cities.	Allopathic.				Homœopathic.			Death Ratio.		Physician's Ratio.	
	Year.	Cases.	Deaths.	Mortality.	Cases.	Deaths.	Mortality.				
				Per cent			Per cent	Al.	H.	Al.	H.
Baltimore	1894	73	3	4.1	13	0	0.0	3.0	0	15.12	1
Cincinnati	1894	28	0	0.0	5	0	0.0	0 0	0	9.46	1
Brooklyn †	1894	366	21	5.74	57	0	0.0	21.0	0	6.5	1
Detroit	1894	*	6	?	*	0	0.0	6.0	0	7.07	1
St. Paul	1894	*	11	?	*	0	0.0	11.0	0	6.37	1
Providence	1894	*	4	?	*	0	0.0	4.0	0	4.43	1
Denver	1894	202	33	16.3	61	1	1.64	?	..	5.66	1
Indianapolis	1894	698	2	0.3	228	0	0.0	33.0	1	21.8	1
Syracuse	1894	8	1	12.5	2	0	0.0	2.0	0	8.74	1
Rochester	1894	1,084	14	1.3	378	5	1.32	1.0	0	4.25	1
Nashville	1894	*	1	?	*	0	0.0	2.8	1	18.9	1
Seattle	1894	1	0	0.0	1	0	0.0	0.0	0	7.19	1
Totals	.....	2,459	74	3.0	745	6	0.8	12.3	1	7.98	1
		*	16	.....	.....	0	.....	16.0	1	8.32	1

TABLE II.—SCARLET FEVER.

Cities.	Allopathic.				Homœopathic.			Death Ratio.		Physician's Ratio.	
	Year.	Cases.	Deaths.	Mortality.	C	Deaths.	mortality.				
				Per cent			Per cent	Al.	H.	Al.	H.
Baltimore	1894	826	107	12.95	71	8	10.1	13.4	.1	15.12	1
Cincinnati	1894	297	11	3.33	35	2	5.71	5.5	1	9.46	1
Brooklyn	1894	1,297	131	10.1	159	9	5.66	14.5	1	6.5	1
Detroit	1894	*	8	?	*	0	0.0	8.0	0	7.07	1
St. Paul	1894	239	13	5.44	60	5	8.33	2.6	1	6.37	1
Providence	1894	433	49	16.32	55	1	1.82	49.0	1	4.43	1
Denver	1894	306	49	16.0	46	3	6.5	18.3	1	5.66	1
Indianapolis	1894	300	4	1.33	28	0	0.0	4.0	0	21.8	1
Syracuse	1894	130	7	5.38	14	2	14.3	3.5	1	8.74	1
Rochester	1894	219	5	2.29	66	0	0.0	0.0	0	4.25	1
Nashville	1894	206	20	9.7	20	2	10.0	10.0	1	18.9	1
Seattle	1894	32	0	0.0	3	0	0.0	0.0	0	7.19	1
Totals	.....	4,285	396	9.24	565	32	5.66	12.4	1	8.3	1
		*	8	?	*	0	0.0	0.8	0	7.07	1

TABLE III.—TYPHOID FEVER.

Cities.	Allopathic.				Homœopathic.			Death Ratio.		Physician's Ratio.	
	Year.	Cases.	Deaths.	Mortality.	Cases.	Deaths.	Mortality.				
				Per cent			Per cent	Al.	H.	Al.	H.
Baltimore	1894	133	244	?	10	13	?	18.7	1	15.12	1
Cincinnati	1894	735	174	3.7	24	4	16.6	45.5	1	9.46	1
Detroit	1894	*	137	?	*	16	?	8.56	1	7.07	1
St. Paul	1894	*	33	?	*	5	?	6.6	1	6.37	1
Providence	1894	199	39	19.5	30	7	23.3	5.6	1	4.43	1
Denver	1894	67	56	83.7	6	3	50.0	18.6	1	5.66	1
Indianapolis	1894	*	69	?	*	2	?	34.5	1	21.8	1
Syracuse	1894	154	27	17.54	11	5	45.4	5.4	1	8.74	1
Rochester	1894	116	17	14.66	23	6	26.1	2.83	1	4.25	1
Nashville	1894	*	44	?	*	4	?	11.0	1	18.9	1
Seattle	1894	56	0	0.0	0	0	0.0	0.0	0	7.19	1
Totals	.....	1,460	557	38.15	104	38	36.54	14.7	1	8.11	1
		*	283	?	*	27	?	10.48	1	10.8	1

* Cases not reported. † First three months.

TABLE IV.—DIPHTHERIA.

Cities.	Allopathic.				Homœopathic.			Death Ratio.		Physician's Ratio.	
	Year.	Cases.	Deaths.	Mortality.	Cases.	Deaths.	Mortality.				
				Per cent			Per cent	Al.	H.	Al.	H.
Baltimore	1894	230	189	82.2	23	11	47.8	17.3	1	15.12	1
Cincinnati	1894	859	206	24.0	44	12	27.3	17.17	1	9.46	1
Brooklyn	1894	462	136	29.22	53	18	34.0	7.55	1	6.5	1
Detroit	1894	*	170	?	*	13	?	18.1	1	1.07	1
St. Paul	1894	156	54	34.6	12	3	25.0	18.0	1	6.37	1
Providence	1894	88	27	30.7	16	9	56.3	3.0	1	4.43	1
Denver	1894	203	66	33.0	21	6	28.6	10.0	1	5.66	1
Indianapolis	1894	208	78	37.5	20	6	30.0	13.0	1	21.8	1
Syracuse	1894	184	57	31.0	30	9	30.0	6.3	1	8.74	1
Rochester	1894	218	73	33.5	71	27	38.0	2.7	1	4.25	1
Nashville	1894	*	5	?	*	1	?	5.0	1	18.9	1
Seattle	1894	18	0	0.0	0	0	0.0	0.0	0	7.19	1
Totals	.....	2,626	886	33.47	290	102	35.17	8.7	1	7.71	1
		*	175	?	*	14	?	10.48	1	10.8	1

TABLE V.—OBSTETRICAL, NO. I.

Cities.	Allopathic.				Homœopathic.			Death Ratio.		Physician's Ratio.	
	Year.	Cases.	Deaths	Mortality.	Cases.	Deaths.	Mortality.				
				Per cent			Per cent	Al.	H.	Al.	H.
Baltimore	1894	2,995	84	2.7	199	3	1.51	28.0	1	15.12	1
Cincinnati	1894	2,553	92	3.6	276	1	0.36	22.0	1	9.46	1
Detroit	1894	2,989	32	1.07	159	2	1.25	16.0	1	7.07	1
Providence	1894	*	22	?	*	3	?	7.3	1	4.43	1
Denver	1894	*	13	?	*	1	?	13.0	1	5.56	1
Indianapolis	1894	1,717	18	1.0	68	1	1.47	18.0	1	21.8	1
Syracuse	1894	1,216	17	1.4	138	3	2.17	5.66	1	8.74	1
Rochester	1894	1,347	13	0.97	419	5	1.19	2.6	1	4.25	1
Nashville	1894	639	7	1.1	66	1	1.5	7.0	1	18.9	1
Seattle	1894	406	5	1.23	88	0	0.0	5.0	0	7.19	1
Totals	.....	13,862	268	1.93	1,413	16	1.13	16.0	1	10.16	1
		*	35	?	*	4	.....	8.75	1	7.71	1

TABLE VI.—OBSTETRICAL, NO. II.

Cities.	Year.	Puerperal Septicæmia.		Puerperal Fever.		Puerperal Eclampsia.		Affections of Pregnancy.		Uterine Hemorrhage.		Dystocia.	
		Al.	H.	Al.	H.	Al.	H.	Al.	H.	Al.	H.	Al.	H.
Baltimore	1894	18	0	16	0	12	2	4	0	4	0	30	1
Detroit	1894	4	1	9	0	10	1	5	0	1	0	3	0
Providence	1894	7	1	8	0	4	1	0	0	2	1	1	0
Denver	1894	0	0	7	1	.....	....	.....	....	4	0	2	0
Indianapolis	1894	9	0	.....	....	4	1	1	0	4	0	.....	....
Syracuse	1894	8	1	4	1	2	0	1	0	1	1	1	0
Rochester	1894	5	0	3	5	3	0	.....	....	2	0	.....	....
Nashville	1894	1	0	3	1	1	0	.....	....	2	0	.....	....
Seattle	1894	.....	....	2	0	.....	....	2	0	1	0	.....	....
Totals	.....	54	3	52	8	36	5	13	0	21	2	37	1

* Cases not reported.

TABLE VIII.—FROM FORM NO. 3. DEATHS.

Cities.	Year.	Acute Stomach and Bowel Diseases.		Ratio		Acute Respiratory Diseases.		Death Ratio.		Death from all causes.		Death Ratio.		Physicians' Ratio.	
		Al	H	Al	H	Al	H	Al	H	Al	H	Al	H	Al	H
Baltimore....	1894	1,256	39	32.2	1	1,589	80	19.9	1	9,005	421	21.43	1	15.12	1
Cincinnati ...	1894	614	52	11.6	1	769	47	16.36	1	*	*			9.46	1
Detroit	1894	624	43	14.5	1	648	55	11.8	1	4,454	300	14.85	1	7.07	1
St. Paul.....	1894	207	16	13.0	1	365	36	10.1	1	1,763	128	14.81	1	6.37	1
Providence...	1894	208	18	11.55	1	276	40	6.9	1	1,656	258	7.2	1	4.43	1
Denver	1894	236	15	15.73	1	217	17	12.76	1	1,464	131	11.17	1	5.66	1
Indianapolis .	1894	234	4	58.5	1	192	5	38.4	1	1,178	47	25.1	1	21.8	1
Syracuse.....	1894	256	27	9.48	1	416	40	10.4	1	385	47	8.29	1	8.74	1
Rochester .. .	1894	348	104	3.34	1	448	93	4.82	1	1,618	400	4.04	1	4.25	1
Nashville	1894	161	11	14.65	1	163	10	16.3	1	1,029	89	11.45	1	18.9	1
Seattle.....	1894	66	3	22.0	1	50	7	7.14	1	246	42	5.86	1	7.19	1
Totals		4,210	332	12.68	1	5,133	430	11.94	1	22,989	1,858	12.37	1	8.83	1

TABLE IX.—TOTALS FROM ALL CITIES REPORTING IN 1894.

DISEASES.	ALLOPATHIC.			HOMŒOPATHIC.			Death Ratio.		Ratio of Cases.[1]		Physicians' Ratio.	
	Cases.	Deaths.	Mortality.	Cases.	Deaths	Mortality.						
			Per cent			Per cent	Al	H	Al	H	Al	H
Measles	2,459	74	3.0	745	6	0.8	12.3	1	7.69	1	7.98	1
Measles	*	16	?	*	0	0.0	16.0	1	10.37	1	8.32	1
Scarlet fever.....	4,285	396	9.24	565	32	5.66	12.4	1	8.27	1	8.03	1
Scarlet fever.....	*	8	?	*	0	0.0	8.0	0	17.0	1	7.07	1
Typhoid fever	1,460	557	38.12	104	38	36.54	14.7	1	7.04	1	8.11	1
Typhoid fever	*	263	?	*	27	?	10.48	1	10.9	1	10.8	1
Diphtheria	2,626	886	33.47	290	102	35.17	8.7	1	7.57	1	7.71	1
Diphtheria	*	175	?	*	14	?	12.5	1	15.6	1	10.32	1
Obstetrical No. 1.	13,862	268	1.93	1,413	16	1.13	16.0	1	8.56	1	10.18	1
Obstetrical No. 2.	*	35	.....	*	4	?	8.75	1	6.91	1	5.33	1
Puerperal septicæmia	.....	54	.....	.....	3	.....	18.0	1	9.1	1	9.0	1
Puerperal fever	.....	52	.....	.....	8	.....	6.5	1	9.1	1	9.0	1
Puerperal eclampsia	.....	36	.....	.....	5	.....	7.2	1	9.1	1	9.0	1
Affections of pregnancy ..	.....	13	.....	.....	0	.....	13.0	0	9.1	1	9.0	1
Uterine hæmorrhage.....	.....	21	.....	.....	2	.....	10.5	1	9.1	1	9.0	1
Dystocia.....	.....	37	.....	.....	1	.....	37.0	1	9.1	1	9.0	1
Acute stomach and bowel diseases	.....	4,210	.....	.....	332	.....	12.68	1	7.92	1	7.94	1
Acute respiratory diseases.	.....	5,133	.....	.....	430	.....	11.94	1	7.92	1	7.94	1
From all causes.....	.....	22,989	.....	.....	1,858	.....	12.37	1	7.92	1	7.94	1

TABLE X.—MEASLES.

Cities.	ALLOPATHIC.				HOMŒOPATHIC.			Death Ratio.		Physicians' Ratio.	
	Year.	Cases.	Deaths.	Mortality.	Cases.	Deaths.	Mortality.				
				Per cent			Per cent	Al	H	Al	H
Baltimore	1895	1,958	68	3.47	248	0	0.0	68.0	1	15.12	1
Detroit	1895	*	1	?	*	0	0.0	1.0	0	7.07	1
Providence.....	1895	*	19	?	*	2	?	9.5	1	4.43	1
Denver	1895	5	2	.40	2	0	0.0	2.0	0	5.66	1
Indianapolis.....	1895	941	9	1.	266	0	0.0	9.0	0	21.8	1
Rochester	1895	36	0	0.	10	0	0.0	2.0	0	4.25	1
Duluth.....	1895	*	2	2.	*	0	0.0	3.0	0	7.14	1
Totals		2,940	98	3.33	526	2	0.38	49.0	1	6.4	1

* Cases not reported.

[1] Ratio of cases of all diseases and births reported by cities under the different heads.

TABLE XI.—SCARLET FEVER.

Cities.	Allopathic.				Homœopathic.			Death Ratio.		Physicians' Ratio.	
	Year.	Cases.	Deaths.	Mortality.	Cases.	Deaths.	Mortality.				
				Per cent			Per cent	Al.	H.	Al.	H.
Baltimore	1895	711	55	7.74	69	4	5.8	13.75	1	15.12	1
Detroit	1895	*	11	?	*	2	?	5.5	1	7.07	1
St. Paul	1895	203	2	1.0	25	0	0.0	2.0	0	6.37	1
Providence	1895	685	44	6.93	85	5	5.88	9.8	1	4.43	1
Denver	1895	576	97	16.8	54	5	9.26	19.4	1	5.66	1
Indianapolis	1895	198	10	5.0	16	0	0.0	10.0	0	21.8	1
Rochester	1895	128	7	5.47	27	0	0.0	7.0	0	4.25	1
Duluth	1895	113	5	4.42	25	3	12.0	1.66	1	7.14	1
Totals	.....	2,564	220	8.58	303	17	5.61	13.0	1	8.44	1
			11			2		5.5	1	7.07	1

TABLE XII.—TYPHOID FEVER.

Cities.	Allopathic.				Homœopathic.			Death Ratio.		Physicians' Ratio.	
	Year.	Cases.	Deaths.	Mortality.	Cases.	Deaths.	Mortality.				
				Per cent			Per cent	Al.	H.	Al.	H.
Baltimore	1895	255	178	69.8	24	14	58.3	12.7	1	15.12	1
Detroit	1895	*	141	?	*	13	?	10.8	1	7.07	1
St. Paul	1895	*	36	?	*	4	?	9.0	1	6.37	1
Providence	1895	170	31	18.23	37	6	16.22	5.16	1	4.43	1
Denver	1895	191	39	20.4	5	5	100.0	7.8	1	5.66	1
Indianapolis	1895	*	137	?	*	6	?	23.0	1	21.8	1
Rochester	1895	131	30	22.9	28	10	35.7	3.0	1	4.25	1
Duluth	1895	1,369	89	6.5	218	7	3.2	12.7	1	7.14	1
Totals	.....	2,116	367	17.4	312	42	13.46	8.74	1	7.7	1
		*	314		*	23		13.65	1	8.93	1

TABLE XIII.—DIPHTHERIA.

Cities.	Allopathic.				Homœopathic.			Death Ratio.		Physicians' Ratio.	
	Year.	Cases.	Deaths.	Mortality.	Cases.	Deaths.	Mortality.				
				Per cent			Per cent	Al.	H.	Al.	H.
Baltimore	1895	617	258	41.83	29	7	24.14	36.86	1	15.12	1
Detroit	1895	*	244	?	*	16	?	15.25	1	7.07	1
St. Paul	1895	401	103	25.68	25	2	8.0	51.5	1	6.37	1
Providence	1895	197	40	20.3	56	7	12.5	5.7	1	4.43	1
Denver	1895	221	36	16.29	27	5	18.57	7.2	1	5.66	1
Indianapolis	1895	488	122	25.0	44	6	36.64	20.3	1	21.8	1
Rochester	1895	293	51	17.07	70	11	15.7	4.64	1	4.25	1
Duluth	1895	43	7	15.2	7	2	28.57	3.5	1	7.14	1
Totals	.....	2,260	617	27.3	258	40	15.5	15.4	1	8.37	1
		*	244		*	16		15.2	1	7.07	1

* Cases not reported.

TABLE XIV.—OBSTETRICAL NO. I.

Cities.	Allopathic.				Homœopathic.			Death Ratio.		Physician's Ratio.	
	Year.	Cases.	Deaths.	Mortality.	Cases.	Deaths.	Mortality.				
				Per cent			Per cent	Al.	H.	Al.	H.
Baltimore	1895	3,061	115	3.79	187	1	0.53	115.0	1	15.12	1
Detroit	1895	2,897	21	0.73	187	0	0.0	21.0	0	7.07	1
Providence	1895	*	21	?	*	2	?	10.5	1	4.43	1
Denver	1895	* *	11	?	*	0	?	11.0	0	5.66	1
Indianapolis	1895	1,872	17	0.9	74	0	0.0	17.0	0	21.8	1
Rochester	1895	1,062	16	1.47	398	4	1.0	4.0	1	4.25	1
Duluth	1895	975	11	1.13	51	3	5.88	3.66	1	7.14	1
Totals	.....	9,887	179	1.81	897	8	0.89	22.4	1	9.55	1
		*	33	?	*	2	?	16.5	1	5.33	1

TABLE XV.—OBSTETRICAL, NO. II.

Cities.	Year.	Puerperal Septicæmia.		Puerperal Fever.		Puerperal Eclampsia.		Affections of Pregnancy.		Uterine Hæmorrhage.		Dystocia.	
		Al.	H.	Al.	H.	Al.	H.	Al.	H.	Al.	H.	Al.	H.
Baltimore	1895	42	0	25	1	19	0	6	0	5	0	18	0
Detroit	1895	3	0	3	0	6	0	2	0	.....	....	7	0
Providence	1895	5	0	3	0	2	2	3	0	3	0	5	0
Denver	1895	4	0	2	0	.....	....	.....	....	2	0	3	0
Indianapolis	1895	1	0	6	0	3	0	7	0	.....	....	.....	..
Rochester	1895	7	0	4	1	1	3	4	0	.....	....	.....	....
Duluth	1895	6	2	3	0	.....	....	0	1	2	0	.....	....
Totals	.....	68	2	46	2	31	5	22	1	12	0	33	0

TABLE XVI.—RATIOS OF WORK REPORTED AND OF PHYSICIANS REPORTING.

Cases Reported.	Baltimore 1894 and 1895.		Cincinnati, 1894.		Detroit, 1894 and 1895.		St. Paul, 1894 and 1895.		Providence, 1894 and 1895.		Denver 1894 and 1895.		Indianapolis, 1894 and 1895.	
	Al.	H.	Al.	H.	Al.	H.	Al.	H.	Al.	H.	Al.	H.	Al.	H.
Typhoid fever	388	34	735	24	.....	...	.....	...	369	67	258	11	.....	...
Scarlet fever	1,537	148	297	35	.....	...	442	85	1,068	140	882	100	498	46
Measles	2,031	261	28	5	.....	...	.....	...	.....	...	207	63	1,639	494
Diphtheria	847	52	859	44	.....	...	557	37	285	72	403	48	696	64
Births	6,056	386	2,553	276	5,586	346	.....	...	.....	...	.....	...	3,598	142
Totals	10,869	881	4,472	384	5,586	346	999	122	1,712	279	1,750	222	6,422	746
Ratio of cases	12.3	1	11.6	1	17	1	8.2	1	6.14	1	7.9	1	8.6	1
Physicians reporting	*771	51	435	46	†425	60	*172	27	*102	23	†340	60	305	14
Ratio physicians	15.12	1	9.46	1	7.7	1	6.37	1	4.43	1	5.66	1	21.8	1

Cases Reported.	Syracuse, 1894.		Rochester, 1894 and 1895.		Nashville, 1894.		Seattle, 1894.		Duluth, 1895.		Brooklyn, 1st 3 mos. of 1894.	
	Al.	H.	Al.	H.	Al.	H.	Al.	H.	Al.	H.	Al.	H.
Typhoid fever	154	11	247	51	.....	...	56	0	1,369	218	.....	...
Scarlet fever	130	14	347	93	206	20	32	3	113	25	1,297	131
Measles	8	2	1,120	388	.....	...	.....	...	.....	...	366	57
Diphtheria	184	30	511	141	.....	...	18	0	43	7	462	53
Births	1,216	138	2,429	817	639	66	406	88	975	51	.....	...
Total	1,692	195	4,654	1,490	845	86	512	91	2,500	301	2,125	241
Ratio of cases	8.68	1	3.12	1	9.8	1	5.63	1	8.35	1	8.8	1
Physicians reporting	166	19	†234	55	308	11	115	16	†50	7	*1,300	200
Ratio physicians	8.74	1	4.25	1	18.9	1	7.19	1	7.14	1	6.5	1

* From physician reporting. † Polk's Directory, third edition.

TABLE XVII.—FROM FORM NO. 3. DEATHS.

Cities.	Year.	Acute Stomach and Bowel Diseases.		Death Ratio.		Acute Respiratory Diseases.		Death Ratio.		Death from all causes.		Death Ratio.		Physicians' Ratio.	
		Al.	H.	Al.	H.	Al.	H.	Al.	H.	Al.	H.	Al.	H.	Al.	H.
Baltimore...	1895	1,309	31	42.23	1	2,014	71	28.37	1	9,877	456	21.24	1	15.12	1
Detroit.....	1895	650	42	15.48	1	635	65	9.77	1	4,529	321	14.1	1	7.07	1
St. Paul.....	1895	225	15	15.0	1	228	16	14.25	1	1,828	143	12.78	1	7.37	1
Providence...	1895	197	12	16.4	1	300	23	13.05	1	1,919	275	7.0	1	4.6	1
Denver	1895	184	4	46.0	1	148	14	10.6	1	1,391	98	14.2	1	5.66	1
Indianapolis..	1895	252	5	50.4	1	272	9	30.2	1	1,374	61	22.5	1	21.8	1
Rochester ...	1895	347	97	3.56	1	498	119	4.18	1	1,728	461	3.75	1	4.25	1
Duluth.....	1895	104	12	8.67	1	110	8	13.75	1	554	42	13.2	1	7.14	1
Totals		3,267	218	15.00	1	4,205	325	12.94	1	23,200	1,857	12.44	1	8.38	1

TABLE XVIII.—TOTALS FROM ALL CITIES REPORTING IN 1895.

Diseases.	Allopathic.			Homœopathic.			Death Ratio.		Case Ratio.		Physicians' Ratio.	
	Cases.	Deaths.	Mortality.	Cases.	Deaths.	Mortality.						
			Per cent			Per cent	Al.	H.	Al.	H.	Al.	H.
Measles.....	2,940	98	3.33	52	2	0.38	49.0	1	7.92	1	9.17	1
Measles.....	*	22	?	*	2	?	9.5	1	10.59	1	6.4	1
Scarlet fever....	2,564	220	8.58	303	17	5.61	13.0	1	7.9	1	8.44	1
Scarlet fever....	*	11	?	*	2	?	5.5	1	17.0	1	7.07	1
Typhoid fever ..	2,116	367	17.4	312	42	13.46	8.75	1	5.71	1	7.7	1
Typhoid fever ..	*	314	?	*	23	?	13.65	1	10.9	1	8.93	1
Diphtheria . .	2,260	611	27.3	258	40	15.5	15.4	1	7.06	1	8.37	1
Diphtheria	*	244	?	*	16	?	15.25	1	17.0	1	7.07	1
Obstetrical No. 1	9,887	179	1.81	897	8	89.0	22.4	1	8.25	1	9.55	1
Obstetrical No. 1	*	33	?	*	2	.....	16.5	1	6.91	1	5.33	1
Puerperal septicæmia.....	.....	68	.....	.....	2	.....	34.0	1	11.2	1	10.03	1
Puerperal fever.	.....	42	.....	.....	2	.....	23.0	1	11.2	1	10.03	1
Puerperal eclampsia...	.....	31	.....	.....	5	.....	6.2	1	11.2	1	10.03	1
Affections of pregnancy....	... .	22	.....	.. ..	1	... .	22.0	1	11.2	1	10.03	1
Uterine hæmorrhage	.....	12	.....	.....	0	.....	12.0	0	11.2	1	10.03	1
Dystocia	.....	33	.....	.....	0	.....	33.0	0	11.2	1	10.03	1
Acute stomach and bowel diseases	3,267	.....	.....	.....	218	.....	15.0	1	8.54	1	8.38	1
Acute respiratory diseases..	4,205	.....	.....	.....	325	.....	12.94	1	8.54	1	8.38	1
From all causes..	23,200	... .	.....	.....	1,857	.....	12.44	1	8.54	1	8.38	1

* Cases not reported.

TABLE XIX.—MEASLES.

Cities.	Allopathic.				Homœopathic.			Death Ratio.		Physicians' Ratio.	
	Years.	Cases.	Deaths.	Mortality.	Cases.	Deaths.	Mortality.				
				Per cent			Per cent	Al.	H.	Al.	H.
Philadelphia	1892	*	70	?	*	5	?	14.0	1	5.17	1
St. Louis	1891-92	969	65	6.7	170	0	0.0	65.0	0	6.5	1
Brooklyn	1894	366	21	5.74	57	0	0.0	21.0	0	6.5	1
Baltimore	1891-95	6,752	232	3.45	625	2	0.32	116.0	1	15.12	1
San Francisco	1892	*	26	?	*	0	?	26.0	0	7.45	1
Cincinnati	1892-94	3,062	193	6.26	254	2	0.8	96.5	1	7.5	1
Detroit	1892-95	*	28	?	*	1	?	28.0	1	7.07	1
Minneapolis	1891-93	1,935	50	2.58	458	5	1.1	10.0	1	5.23	1
Kansas City	1891-93	348	4	1.15	52	2	3.86	2.0	1	7.22	1
Providence	1891-95	*	75	?	*	5	?	15.0	1	4.43	1
Denver	1891-95	316	51	16.14	83	3	3.62	17.0	1	5.66	1
Indianapolis	1891-95	3,105	27	0.87	545	0	0.0	27.0	0	21.8	1
Allegheny	1891-93	*	79	?	*	5	?	15.8	1	7.61	1
Rochester	1893-95	1,370	19	1.38	441	5	1.13	3.8	1	4.25	1
Syracuse	1892-94	87	43	50.0	13	2	15.39	21.5	1	8.74	1
Nashville	1890-94	95	30	31.85	60	1	1.66	28.0	1	18.9	1
Duluth	1891-94	*	5	?	*	0	?	5.0	0	7.14	1
Seattle	1894	*	5	?	*	0	?	5.0	0	7.19	1
Lincoln	1892	*	5	?	*	0	?	5.0	0	4.13	1
Totals	.....	18,425	785	3.99	2,758	22	0.8	33.4	1	6.64	1
		*	293	.....	*	16	.....	18.3	1	5.9	1

TABLE XX.—SCARLET FEVER.

Cities.	Allopathic.				Homœopathic.			Death Ratio.		Physicians' Ratio.	
	Years.	Cases.	Deaths.	Mortality.	Cases.	Deaths.	Mortality.				
				Per cent			Per cent	Al.	H.	Al.	H.
Philadelphia	1892	5,213	395	7.58	1,053	71	6.74	5.56	1	5.17	1
Brooklyn	1894	1,297	131	10.1	159	9	5.66	14.5	1	6.5	1
St. Louis	1891	813	95	10.46	138	5	3.62	19.0	1	6.5	1
Baltimore	1891-95	5,881	580	9.95	420	33	7.86	17.6	1	15.12	1
San Francisco	1892	*	96	.....	.....	1	.....	96.0	1	7.45	1
Cincinnati	1892-94	1,235	64	5.18	125	4	3.2	16.0	1	9.46	1
Detroit	1891-95	1,411	181	12.83	279	16	5.73	11.3	1	7.07	1
Minneapolis	1891-93	1,711	126	7.36	546	14	2.57	9.0	1	5.23	1
Rochester	1892-95	1,891	185	7.72	499	24	4.81	5.62	1	4.20	1
St. Paul	1890-95	1,720	97	5.64	368	11	3.26	8.82	1	6.37	1
Kansas City	1891-93	469	22	4.7	89	2	2.25	11.0	1	7.22	1
Providence	1891-95	1,410	159	11.27	232	10	4.31	15.9	1	4.43	1
Denver	1891-95	2,124	228	10.73	333	20	6.0	11.4	1	5.66	1
Indianapolis	1891-95	1,371	48	3.5	119	1	0.84	48.0	1	21.8	1
Allegheny	1895	179	47	26.26	13	0	0.0	47.0	0	7.35	1
Syracuse	1892-94	315	20	6.35	52	4	7.7	5.0	1	8.74	1
Nashville	1890-94	294	27	9.1	35	2	5.71	13.5	1	18.9	1
Duluth	1891-95	222	20	9.0	36	3	8.33	6.66	1	7.14	1
Dayton	1892	6	3	50.0	7	0	0.0	3.0	0	8.58	1
Totals	.....	27,512	2,378	8.99	4,603	229	5.0	10.4	1	6.57	1
		*	96	.....	.....	1	.....	96.0	1	7.45	1

* First three months of 1894.

TABLE XXI.—TYPHOID FEVER.

Cities.	Allopathic.				Homœopathic.			Death Ratio.		Physicians' Ratio.	
	Year.	Cases.	Deaths.	Mortality.	Cases.	Deaths.	Mortality.				
				Per cent			Per cent	Al.	H.	Al.	H.
Philadelphia	1892	2,022	365	18.05	333	60	18.01	6.8	1	5.17	1
St. Louis	1891-92	3,164	507	16.0	449	54	12.0	9.4	1	6.5	1
Baltimore	1891-95	918	1,073	?	55	55	1.0	19.5	1	15.12	1
San Francisco	1892	*	99	?	*	4	?	24.75	1	7.45	1
Cincinnati	1893-94	985	184	18.68	48	5	10.4	36.8	1	7.5	1
Detroit	1891-95	*	297	?	*	34	?	8.74	1	7.07	1
Minneapolis	1891-93	1,502	176	11.71	247	26	10.53	6.8	1	5.23	1
Rochester	1892-95	1,368	170	12.43	299	46	15.38	3.7	1	4.25	1
St. Paul	1890-95	*	290	?	*	26	?	11.15	1	6.57	1
Kansas City	1891-93	*	134	?	*	18	?	7.44	1	7.22	1
Providence	1891-95	769	164	21.33	138	37	26.8	4.43	1	4.43	1
Denver	1891-95	740	264	35.95	105	22	20.95	12.0	1	5.66	1
Indianapolis	1893	260	15	5.77	10	0	0.0	15.0	1	21.8	1
Indianapolis	1891-95	*	299	?	*	13	?	23.0	1	21.8	1
Allegheny	1892	*	119	?	*	7	?	17.0	1	7.61	1
Allegheny	1893	179	47	26.26	13	0	0.0	47.0	0	7.61	1
Syracuse	1892	*	33	?	*	1	?	33.0	1	8.47	1
Syracuse	1893-94	278	39	14.0	36	7	19.4	5.57	1	8.47	1
Nashville	1890-94	*	268	?	*	8	?	33.5	1	18.9	1
Dayton	1892	58	33	56.89	52	2	3.85	16.5	1	8.58	1
Duluth	1891-95	2,070	192	9.27	297	20	6.73	9.1	1	7.14	1
Lincoln	1892	*	32	?	*	5	?	6.8	1	4.13	1
Totals		14,313	3,229	22.56	2,082	316	15.15	10.2	1	6.38	1
		*	1,571	.....	.....	116	.....	13.54	1	7.16	1

TABLE XXII.—DIPHTHERIA.

Cities.	Allopathic.				Homœopathic.			Death Ratio.		Physicians' Ratio.	
	Years.	Cases.	Deaths.	Mortality.	Cases.	Deaths.	Mortality.				
				Per cent			Per cent	Al.	H.	Al.	H.
St. Louis	1892	6,367	265	41.67	101	28	27.72	9.15	1	6.5	1
Baltimore	1891-95	2,624	1,334	51.26	145	73	50.24	18.79	1	15.12	1
San Francisco	1892	*	248	?	*	11	?	22.55	1	7.45	1
Cincinnati	1892-94	2,553	679	27.0	139	44	31.65	15.43	1	7.5	1
Detroit	1892	980	212	21.6	171	42	24.56	5.0	1	7.12	1
Detroit	1893-94	*	414	?	*	29	?	14.3	1	7.07	1
Minneapolis	1891-93	704	185	26.27	159	37	23.9	5.0	1	5.23	1
Rochester	1892-95	1,197	396	33.1	408	111	27.3	3.57	1	4.25	1
St. Paul	1890-95	1,782	489	27.45	132	37	28.0	13.2	1	6.37	1
Kansas City	1891-93	228	71	31.6	50	11	22.0	6.5	1	7.22	1
Providence	1891-95	613	143	23.3	121	26	21.5	5.5	1	4.43	1
Denver	1891-95	1,255	380	30.3	198	53	26.8	7.17	1	5.66	1
Indianapolis	1891-95	21,62	646	29.9	155	39	25.2	16.6	1	21.8	1
Allegheny	1892	*	86	?	*	7	?	12.29	1	7.61	1
Allegheny	1893	175	57	32.57	10	1	10.0	57.0	1	7.35	1
Syracuse	1892-94	651	221	33.9	60	16	26.6	13.8	1	8.47	1
Nashville	1890-92	45	21	46.6	9	3	33.3	7.0	1	18.9	1
Nashville	1893-94	*	10	?	*	1	?	10.0	1	18.9	1
Dayton	1892	70	33	47.14	56	5	8.9	6.6	1	8.58	1
Duluth	1891-95	297	65	21.9	43	15	34.9	4.33	1	7.14	1
Lincoln	1892	116	31	26.27	35	9	25.71	3.44	1	4.13	1
Totals	.....	16,068	5,228	32.5	1,992	550	27.95	9.5	1	7.43	1
		*	758	.....	.....	48	.....	15.85	1	5.9	1

* Cases not reported.

TABLE XXIII.—OBSTETRICAL, NO. I. TOTALS.

Cities.	Years.	Allopathic. Cases.	Allopathic. Deaths.	Allopathic. Mortality.	Homœopathic. Cases.	Homœopathic. Deaths.	Homœopathic. Mortality.	Death Ratio. Al.	Death Ratio. H.	Physicians' Ratio. Al.	Physicians' Ratio. H.
				Per cent			Per cent				
St. Louis	1892	3,101	99	3.13	740	15	2.03	6.66	1	6.5	1
Baltimore	1891-95	12,117	403	3.33	787	6	0.76	67.16	1	15.12	1
Baltimore	1893	*	189	?	*	6	31.0	31.5	1	15.12	1
San Francisco	1892	*	168	?	*	5	?	33.6	1	7.45	1
Detroit	1892	*	26	?	*	2	?	13.0	1	7.07	1
Detroit	1894-95	5,886	53	0.9	346	2	0.29	26.5	1	7.07	1
Cincinnati	1892-94	7,400	306	4.13	792	11	1.38	27.3	1	7.5	1
Minneapolis	1891-93	4,797	86	1.8	1,379	7	0.5	12.3	1	4.23	1
Rochester	1892-95	4,642	64	1.38	1,594	23	1.44	2.79	1	4.25	1
St. Paul	1890-93	6,092	96	1.58	810	6	0.74	16.0	1	6.37	1
Kansas City	1891-93	6,006	123	2.05	486	1	0.21	23.0	1	7.22	1
Providence	1891-95	*	113	?	*	17	?	6.65	1	4.43	1
Denver	1891-95	*	63	?	*	3	?	21.0	1	5.66	1
Indianapolis	1891	*	19	?	*	0	?	19.0	0	21.8	1
Indianapolis	1892-95	6,708	56	0.84	228	1	0.45	56.0	1	21.8	1
Allegheny	1892	*	28	?	*	1	?	28.0	1	7.61	1
Syracuse	1892-94	3,586	36	1.0	456	4	0.88	9.0	1	8.47	1
Nashville	1890-94	2,906	37	1.27	250	1	0.4	37.0	1	18.9	1
Duluth	1891-95	2,241	18	0.8	184	4	2.17	4.5	1	7.14	1
Seattle	1892-94	1,306	18*	1.38	255	0	0.0	18.0	0	7.19	1
Totals	.....	66,788	1,395	2.09	8,307	71	0.85	19.8	1	7.88	1
		*	606	.....	*	34	.....	17.82	1	8.36	1

* Cases not reported.

TABLE XXIV.—OBSTETRICAL, NO. II. TOTALS.

Cities.	Years.	Puerperal Septicæmia. Al.	Puerperal Septicæmia. H.	Puerperal Fever. Al.	Puerperal Fever. H.	Puerperal Eclampsia. Al.	Puerperal Eclampsia. H.	Affections of Pregnancy. Al.	Affections of Pregnancy. H.	Uterine Hæmorrhage. Al.	Uterine Hæmorrhage. H.	Dystocia. Al.	Dystocia. H.
St. Louis	1892	36	4	28	3	8	3	13	4	2	0	12	2
Baltimore	1891-95	183	1	156	3	78	2	41	3	20	2	114	1
San Francisco	1892	29	1	87	3	7	0	28	1	8	0	9	0
Cincinnati	1892-93	.....	.....	100	6	43	0	55	3	16	1	0	0
Detroit	1892-95	7	1	32	0	22	3	7	0	1	0	10	0
Minneapolis	1891-93	27	1	32	1	7	3	11	0	3	2	6	0
Rochester	1892-95	18	1	20	8	12	7	4	1	8	3	2	3
St. Paul	1890-93	29	1	35	1	7	3	1	0	12	0	12	1
Kansas City	1891-93	72	1	38	0	0	0	1	0	1	0	7	0
Providence	1891-95	23	1	24	3	12	5	9	4	10	1	11	2
Denver	1891-95	14	1	39	2	5	0	2	0	6	0	7	0
Indianapolis	1891-95	21	0	20	0	16	1	12	0	6	0	1	0
Allegheny	1892	6	0	12	0	2	0	3	0	5	1	0	0
Syracuse	1892-94	13	2	7	1	4	0	7	0	1	1	4	0
Nashville	1890-94	11	0	19	1	11	0	8	1	3	0	1	0
Seattle	1892-94	4	0	6	0	5	0	3	0	1	0	.....	...
Duluth	1891-95	8	2	5	1	0	0	0	1	2	0	.....	...
Lincoln	1892	0	0	1	1	4	0	18	3	4	2	....	...
Totals	.....	501	17	661	34	243	27	223	21	109	13	196	9

TABLE XXV.—RATIO OF WORK REPORTED, AND OF PHYSICIANS REPORTING.

Cities.	Years.	Cases.		Ratio of Cases.		Physicians.		Physicians' Ratio.	
		Al.	H.	Al.	H.	Al.	H.	Al.	H.
Philadelphia [2]	1892	7,235	1,386	5.22	1	2,026	394	5.17	1
St. Louis [1]	1891-92	3,456	1,590	5.31	1	637	98	6.5	1
Baltimore [1]	1891-95	28,238	2,032	13.9	1	771	51	15.12	1
Brooklyn *a* [3]	1894	2,125	241	8.8	1	1,300	200	6.5	1
San Francisco	1892	*	*	?	0	700	94	7.45	1
Cincinnati [1]	1892-94	15,480	1,371	11.29	1	450	60	7.5	1
Detroit *b*	1892-95	8,277	796	10.03	1	425	60	7.07	1
Minneapolis [1]	1891-93	11,041	2,771	3.98	1	277	53	5.23	1
Rochester [4]	1892-95	9,780	3,083	3.14	1	234	55	4.25	1
St. Paul [5]	1890-95	7,593	1,188	6.31	1	172	27	6.37	1
Kansas City [6]	1891-93	6,957	663	10.48	1	267	37	7.22	1
Providence [4]	1891-95	3,246	576	5.95	1	103	26	4.0	1
Denver *c* [7]	1891-95	4,120	668	6.17	1	340	60	5.66	1
Indianapolis [6]	1891-95	11,458	994	11.5	1	232	14	18.9	1
Allegheny [7]	1893	1,872	129	14.5	1	125	17	7.35	1
Syracuse [1]	1892-94	4,223	531	7.95	1	166	19	8.74	1
Nashville	1890-94	4,061	440	9.23	1	208	11	18.91	1
Dayton	1892	134	115	1.65	1	103	12	8.58	1
Duluth	1891-95	4,830	560	8.62	1	50	7	7.14	1
Seattle	1892-94	1,413	258	5.48	1	115	16	7.19	1
Lincoln	1892	182	44	3.91	1	62	15	4.13	1
Totals		134,076	19,134	7.0	1	8,596	1,295	6.64	1

* Not reported.
[1] Scarlet fever, diphtheria, typhoid fever, measles, and births.
[2] Typhoid fever and scarlet fever.
[3] Scarlet fever, measles, and diphtheria.
[4] Scarlet fever, diphtheria, typhoid fever, and births.
[5] Scarlet fever, diphtheria, and births.
[6] Scarlet fever, diphtheria, measles, and births.
[7] Scarlet fever, typhoid fever, measles, and diphtheria.
a For first three months.
b Scarlet fever and diphtheria in 1892, labors in 1894 and 1895.
c Births for 1894 and 1895 only.

TABLE XXVI.—FROM FORM NO. 3, DEATHS.—TOTALS.

Cities.	Years.	Acute Stomach and Bowel Diseases.		Death Ratio.		Acute Respiratory Diseases.		Death Ratio.		Deaths from all Causes.		Death Ratio.		Ratio of Cases Reported.[1]		Physicians' Ratio.	
		Al.	H.	Al.	H.	Al.	H.	Al.	H.	Al.	H.	Al.	H.	Al.	H.	Al.	H.
St. Louis	1892	808	67	12.1	1	1,415	83	17.1	1	3,179	237	13.47	1	5.31	1	6.5	1
Baltimore	1891-95	6,158	196	31.42	1	7,490	287	26.45	1	46,974	2,081	22.57	1	13.9	1	15.12	1
San Francisco	1892	536	12	47.08	1	1,966	49	40.12	1	6,674	198	33.71	1	*	*	7.45	1
Cincinnati	1892-94	1,605	129	12.44	1	2,591	154	16.82	1	10,653[2]	725[2]	14.69	1	11.29	1	7.5	1
Detroit	1891-95	1,588	118	13.46	1	1,611	161	10.0	1	10,040	758	13.25	1	10.3	1	7.07	1
Minneapolis	1891-93	650	108	6.02	1	830	118	7.03	1	4,946	911	5.43	1	3.98	1	5.23	1
Rochester	1892-95	1,307	341	3.83	1	1,968	410	4.8	1	7,341	1,784	4.11	1	3.14	1	4.25	1
St. Paul	1890-95	1,298	93	13.96	1	1,524	146	10.44	1	9,566	839	11.4	1	6.31	1	6.37	1
Kansas City	1891-93	558	32	17.44	1	643	32	20.1	1	4,746	290	16.37	1	10.49	1	7.22	1
Providence	1891-95	1,003	100	10.03	1	1,448	191	7.58	1	9,194	1,406	6.47	1	5.95	1	4.0	1
Denver	1891-95	1,090	73	14.93	1	1,131	101	11.2	1	2,855[3]	229[3]	12.47	1	6.17	1	5.66	1
Indianapolis	1891-95	1,001	25	40.0	1	1,127	19	59.31	1	8,306	278	29.88	1	11.5	1	18.9	1
Allegheny	1890-93	775	47	16.49	1	746	47	15.87	1	4,118	299	13.77	1	14.5	1	7.85	1
Syracuse	1890-94	660	78	8.46	1	1,067	92	11.81	1	2,962[2]	311[2]	9.52	1	7.95	1	8.74	1
Nashville	1890-94	946	48	19.71	1	861	55	15.65	1	5,992	418	14.33	1	9.23	1	18.91	1
Dayton	1892	124	5	24.8	1	116	13	8.92	1	687	52[2]	13.21	1	1.65	1	8.58	1
Duluth	1891-95	249	17	14.65	1	210	14	15.1	1	554[4]	42[4]	13.2	1	8.62	1	7.14	1
Seattle	1892-94	170	16	10.62	1	160	20	8.0	1	948	153	6.2	1	5.48	1	7.19	1
Lincoln	1892	79	6	16.2	1	105	16	5.56	1	428	67	6.39	1	4.14	1	4.13	1
Totals	.....	20,605	1,511	13.64	1	27,029	2,008	13.46	1	140,180	11,078	12.6	1	7.0	1	6.64	1

* Cases not reported.
[1] Ratio of cases and labors reported to the health officers.
[2] For 1892 and 1893 only.
[3] For 1894 and 1895 only.
[4] For 1895 only.

TABLE XXVII.—TOTALS FROM ALL CITIES REPORTED.

Diseases.	Allopathic.			Homœopathic.			Death Ratio.		Ratio of Cases Reported.		Physicians' Ratio.	
	Cases.	Deaths.	Mortality.	Cases.	Deaths.	Mortality.						
			Per cent			Per cent	Al.	H.	Al.	H.	Al.	H.
Measles	18,425	735	3.99	2,758	22	0.8	33.4	1	7.34	1	6.64	1
Measles	*	293	?	*	16	?	18.3	1	6.9	1	5.9	1
Scarlet fever	27,512	2,378	8.99	4,603	229	5.0	10.4	1	7.0	1	6.57	1
Scarlet fever	*	96	?	*	1	?	96.0	1	*	*	7.45	1
Typhoid fever	14,313	3,229	22.56	2,086	316	15.15	10.2	1	6.65	1	6.88	1
Typhoid fever	*	1,571	?	*	116	?	13.54	1	8.72	1	7.16	1
Diphtheria	16,088	5,228	32.5	1,992	550	27.95	9.5	1	7.12	1	7.43	1
Diphtheria	*	758	?	*	48	?	15.85	1	5.73	1	5.9	1
Labors	66,788	1,396	2.09	3,307	71	0.85	19.8	1	7.11	1	7.88	1
Labors	*	606	?	*	34	?	17.82	1	11.0	1	8.36	1
Puerperal septicæmia	.....	501	.....	.....	17	.....	29.47	1	8.9	1	8.07	1
Puerperal fever	.....	661	.....	.....	34	.....	19.44	1	8.9	1	8.07	1
Puerperal eclampsia	.....	243	.....	.....	27	.....	9.0	1	8.9	1	8.07	1
Affections of pregnancy	.....	223	.....	.....	21	.....	10.62	1	8.9	1	8.07	1
Uterine hæmorrhage	.....	109	.....	.....	13	.....	8.38	1	8.9	1	8.07	1
Dystocia	.....	196	.....	.....	9	.....	21.77	1	8.9	1	8.07	1
Acute stomach and bowel diseases	.....	20,605	.....	.....	1,511	.....	13.64	1	7.0	1	6.64	1
Acute respiratory diseases	.....	27,029	.....	.....	2,008	.....	13.64	1	7.0	1	6.64	1
Deaths from all causes	.....	140,181	.....	.....	11,078	.....	13.64	1	7.0	1	6.64	1

* Cases not reported.

There is no Table VII. The data it should contain are found in Table XVI.

Tables I. to IX., inclusive, represent the work reported for 1894, and are made up as the tables heretofore presented. The mortality per cent. of the two schools is given where cases are reported, but as cases of some diseases are poorly reported, the comparison is carried further, and the death ratio is given as well as the ratio of physicians in practice in the city or cities designated.

The second set of tables, X. to XVIII., inclusive, gives the work reported for 1895, and are treated just as those of 1894.

The third set of nine tables, from XIX. to XXVII., inclusive, is a summary of all the work done since its inception.

To study these tables for a few minutes I will call your attention to Table XXVII., which is a summary of all the work done in all the cities. Taking measles as an example, we find that the old school reported 18,425 cases, with 735 deaths, a mortality of 3.99 per cent., while the homœopaths reported 2,758 cases, with 22 deaths, a mortality of 0.8 of one per cent. Since cases of measles are not fully reported by members of either school, it is evident that the mortality per cent. alone cannot be relied upon. We therefore note that the allopaths report 33.4 deaths from measles to our 1, while they report in the same cities and covering the same period of all contagious diseases

and births attended only 7.34 to our 1, and have of physicians in these cities 6.64 to our 1.

The second line indicates the deaths reported in cities in which cases are not reported, the death ratio is compared with the ratio of cases of other diseases and births reported in these cities, and with the physicians of the two schools in practice in the same cities. Scarlet fever, typhoid fever, diphtheria, and labor cases are treated in the same manner.

Of puerperal diseases we have no record, save in the deaths occurring from them. The ratio of cases reported is figured on the number of labors attended by members of the two schools.

In acute stomach and bowel diseases, acute respiratory diseases, and deaths from all causes, we have no record of the number of cases attended by members of the two schools, but can compare the death ratios with the ratios of all work reported to the health offices, and with the ratio of physicians reporting.

What has been said of the summary of all work is true of the summaries of 1894 and 1895, and I hope will make simple the study of any or all of the tables.

Continuing with Table XXVII. and carrying our study a little farther we learn that for the same number of cases of measles treated by the two schools the allopaths lose 4.99 to our 1; that on the basis of work reported they lose 4.55 to our 1, and that on the basis of physicians treating they lose 5.03 to our 1. In scarlet fever, on the basis of mortality per cent., they lose 1.8 to our 1; on the basis of all work reported, 1.49 to our 1, and on the basis of physicians, 1.59 to our 1. To carry this through, the following table is given. It is based on 100 deaths reported by the homœopaths.

TABLE XXVIII.—SHOWING THE RELATIVE NUMBER OF DEATHS REPORTED BY THE TWO SCHOOLS FIGURED ON THE BASIS OF SAME AMOUNT OF WORK DONE, AND 100 DEATHS REPORTED BY THE HOMŒOPATHS.

Diseases.	Homœopathic.	Allopathic.		
	On Basis of 100 Deaths.	Basis of Mortality. Per cent.	Basis of Work Reported.	Basis of Physicians.
Measles	100	499	455	503
Scarlet fever	100	180	149	159
Typhoid fever	100	149	153	160
Diphtheria	100	116	133	128
Labors	100	246	279	251
Puerperal septicæmia	100	.....	331	365
Puerperal fever	100	.....	218	241
Puerperal eclampsia	100	.....	101	110
Affections of pregnancy	100	.....	111	132
Uterine hemorrhage	100	.....	94	104
Dystocia	100	.....	243	270
Acute stomach and bowel diseases	100	.....	195	204
Acute respiratory diseases	100	.....	192	201
From all causes	100	.....	181	190

This table needs no explanation. As stated before, we have no means of knowing the number of cases of puerperal diseases, acute stomach and bowel diseases, etc., that are treated, and must deal with deaths from these, making the comparisons with relative amounts of work reported and of physicians reporting.

Figured on the basis of the deaths reported by the allopaths in excess of those by the homœopaths for the same number of cases treated, the amount of work reported, and the same number of physicians reporting, we have the following table (Table XXIX.), in which the first column represents the number of deaths the allopaths reported, the second the number of deaths the homœopaths would have reported on the basis of mortality per cent., the third the allopathic excess on the basis of mortality per cent., the fourth the number of deaths the homœopaths would have reported on the basis of all work reported, the fifth the allopathic excess on the basis of all work reported, the sixth the number of deaths the homœopaths would have had on the basis of physicians reporting, and the seventh the allopathic excess on basis of physicians reporting.

TABLE XXIX.—SHOWING EXCESS OF DEATHS OCCURRING UNDER ALLOPATHIC TREATMENT OVER THAT OF HOMŒOPATHIC.

Diseases.	Deaths reported by Allopaths.	Homœopathic Deaths on basis of Mortality Per cent.	Allopaths' Excess.	Homœopathic Deaths on basis of Work Reported.	Allopaths' Excess.	Homœopathic Deaths on basis of Physicians.	Allopaths' Excess.
Measles	735	147	588	184	551	146	589
Scarlet fever	2,378	1,320	1,057	1,596	782	1,433	945
Typhoid fever	3,229	2,160	1,069	2,110	1,119	2,000	1,229
Diphtheria	5,228	4,507	711	3,931	1,297	4,084	1,144
Labors	1,395	567	828	500	895	556	839
Puerperal septicæmia	501	.....	.....	151	350	137	364
Puerperal fever	661	.....	.....	303	358	274	387
Acute stomach and bowel diseases	20,605	.....	.....	10,567	10,038	10,100	10,505
Acute respiratory diseases	27,029	.....	.....	14,078	12,941	13,448	13,581
From all causes	140,161	.....	.....	77,448	62,733	73,779	66,402

While no one of these methods tells the whole truth, because of the failure of physicians to report their cases of contagious diseases and births to the health offices, they, combined, as nearly tell the truth as the records will permit. This is nearer than at first appears. Our edifice is supported by three columns, any one of which alone should support it, but all of which combined render it impregnable.

While it is undoubtedly true that contagious diseases and births are not reported as they should be, it is also true that the records of deaths from various causes are practically correct. In all the cities represented in this report it is necessary that a cause of death be in the hands of the health officer before the body can be buried.

Our records show that in all diseases the allopaths sign death cer-

tificates greatly in excess of their proportion on any basis of calculation; in fact, that they sign practically two death certificates to our one on any basis of comparison. It lies with them to tell why this is true.

According to these reports the deaths in the United States would be about 500,000 per year more under allopathic than under homœopathic treatment. In 1873 we thought we had a plague in the form of cholera, and yet statistics from the eighteen States most affected gave only 3,800 deaths.

When the people realize what these facts mean to them individually they will know whom to consult in sickness. Then will medical students know what school cures the sick. God speed the day!

REPORT

OF THE

Committee on Organization, Registration, and Statistics.

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HOMŒOPATHIC ORGANIZATIONS AND INSTITUTIONS IN THE UNITED STATES.

By Thomas Franklin Smith, M.D., New York, N. Y.

National Societies.

American Institute of Homœopathy. Annual meeting was held in Omaha, Neb., from June 23 to 29, 1898. President, Albert R. Wright, M.D., 414 Elmwood Avenue, Buffalo, N. Y.; Secretary, Eugene H. Porter, M.D., 181 West Seventy-third Street, New York City. Organized 1844. Not incorporated. Members, 1,659; admitted last year, 97; died last year, 25. Annual dues, $5.00. Publishes its Transactions.

International Hahnemannian Association. Annual meeting was held at Atlantic City, N. J., from June 14 to 17, 1898. President, Thomas M. Dillingham, M.D., 8 West Forty-ninth Street, New York City; Secretary, Erastus E. Case, M.D., 109 Ann Street, Hartford, Conn. Organized 1880. Not incorporated. Members, 142; admitted last year, 4. Annual dues, $5.00. Publishes its annual "Transactions."

American Ophthalmological and Laryngological Society. Annual meeting was held in Chicago, Ill., June 22 and 23, 1898. President, William R. King, M.D., 1422 K Street, N. W., Washington, D. C.; Secretary, Charles H. Helfrich, M.D., 64 West Forty-ninth Street, New York City. Organized 1896. Not incorporated. Number of members, 120; deceased last year, 1. Annual dues, $3.00. Publishes its annual "Transactions." Delegate, Arthur B. Norton, M.D.

American Obstetrical Society. Has held no meeting for the last four years. President, John Nicholas Mitchell, M.D., 1505 Spruce Street, Philadelphia, Pa.; Secretary, George W. Winterburn, M.D., 42 Bradhurst Avenue, New York City. Organized 1885. Incorporated 1885. Members, 119. Annual dues, $1.00.

American Association of Orificial Surgeons. Annual meeting is held in Chicago, Ill., the first week in September. President, Charles E. Sawyer, M.D., Marion, Ohio; Secretary, W. F. Curryer, M.D., Indianapolis, Ind. Organized 1887; incorporated 1887. Number of members, 300; admitted last year, 10; died last year, 2. Annual dues, $1.00. Publishes its "Transactions."

National Association of Homœopathic Medical Examiners. Annual meeting was held in Omaha, Neb., at the same time with the American Institute. President, Albert R. Wright, M.D., 414 Elmwood Avenue, Buffalo, N. Y.; Secretary, Horace M. Paine, M.D., West Newton, Mass. Organized 1891. Not incorporated. Members, 100. Annual dues, $1.00.

National Association of Superintendents and Managers of Homœopathic Hospitals for the Insane. Annual meeting was held in Omaha, Neb., at the same time with the American Institute. President, Selden H. Talcott, M.D., Middletown, N. Y.; Secretary, Horace M. Paine, M.D., West Newton, Mass. Organized 1894. Not incorporated. Members, 100. Annual dues, $1.00. Delegate, Horace M. Paine, M.D.

Society of Homœopathicians. Report refused.

Sectional or Interstate Societies.

Missouri Valley Medical Association. The annual meeting was held in Iowa City, Iowa, September, 1897. President, L. C. McElwee, M.D., 215 South Jefferson Avenue, St. Louis, Mo.; Secretary, A. M. Linn, M.D., Des Moines, Iowa. Organized 1884. Not incorporated. Members, 160; admitted last year, 15. Annual dues, $3.00. Delegate, Moses T. Runnels, M.D.

Southern Homœopathic Medical Association. The annual meeting is held in different Southern cities. President, Lizzie Gray Gutherz, M.D., 3,689 Olive Street, St. Louis, Mo.; Secretary, F. James McMillan, M.D., 217 North Vine Street, Nashville, Tenn. Organized 1885. Not incorporated. Members, 156; admitted last year, 6; died last year, 1. Annual dues, $3.00. Publishes its "Transactions."

State Societies.

Alabama Homœopathic Medical Association. Annual meeting will be held in Birmingham in November, 1898. President, A. M. Duffield, M.D., Huntsville, Ala.; Secretary, A. N. Ballard, M.D., Birmingham, Ala. Organized 1890. Incorporated 1890. Members, 10. Annual dues, $3.00.

California State Homœopathic Medical Society. Annual meeting is held in different places each year, on the second Wednesday in May. President, George H. Martin, M.D., 606 Sutter Street, San Francisco, Cal.; Secretary, Eleanor F. Martin, M.D., 606 Sutter Street, San Francisco, Cal. Organized 1877. Incorporated 1877. Members, 135; admitted last year, 9. Annual dues, $2.00. Delegates, James W. Ward, M.D., E. V. Van Norman, M.D.

Homœopathic Medical Society of the State of Colorado. The annual meeting is held alternately in Denver and some other city on the second Tuesday in May. President, Edward H. King, M.D., 729 Sixteenth Street, Denver, Col.; Secretary, J. P. Willard, M.D., Masonic Temple, Denver, Col. Organized 1881. Not incorporated. Members, 60. Annual dues, $2.00. "The Society is alive, and doing good work."

Connecticut Homœopathic Medical Society. The annual meeting is held alternately in New Haven and Hartford, on the third Tuesday in May. The semi-annual meeting is held in October, at different place each year. President, Charles Vishno, M.D., 361 Orange Street, New Haven, Conn.; Secretary, Edwin C. M. Hall, M.D., 82 Grand Avenue, New Haven, Conn. Organized 1851. Incorporated 1864. Members, 91; admitted last year, 7; died last year, 1. Annual dues, $3.00. Publishes its "Transactions." Delegates, Edward B. Hooker, M.D., Charles H. Colgrove, M.D.

Medical Society of Delaware and the Peninsula. The annual meeting is held in Wilmington, Del., on the second Thursday in November. President, J. Harmer Rile, M.D., 617 Delaware Avenue, Wilmington, Del.; Secretary, Drusilla G. Barlow, M.D., 811 Washington Street, Wilmington, Del. Organized 1883. Incorporated 1884. Number of members, 23; admitted last year, 2. Annual dues, $2.00. Delegates, G. R. Carmichael, M.D., H. W. Howell, M.D.

Illinois Homœopathic Medical Association. The annual meeting is held alternately in Chicago and some other city in the State, on the second Tuesday in May. President, Allen C. Cowperthwaite, M.D., 31 Washington Street, Chicago, Ill.; Secretary, W. W. Stafford, M.D., 100 State Street, Chicago, Ill. Organized 1855. Incorporated 1865. Members, 450; admitted last year, 19. Annual dues, $2.00.

Indiana Institute of Homœopathy. The annual meeting is held in Indianapolis, on the second Wednesday in May. President, W. B. Stewart, M.D., Indianapolis; Secretary, A. W. Holcombe, M.D., Kokomo.

Hahnemann Medical Association of Iowa. The annual meeting is held alternately in Des Moines and Sioux City, on the second Tuesday in May. President, J. L. Hanchett, M.D., Sioux City, Iowa; Secretary, Phineas J. Montgomery, M.D., Council Bluffs, Iowa. Organized 1870. Incorporated 1873. Members, 162; admitted last year, 18. Annual dues, $2.00.

Homœopathic Medical Society of the State of Kansas. The annual meeting is held in different places each year, on the first Wednesday in May. President, Edward Bumgardner, M.D., Lawrence, Kan.; Secretary, H. C. Oatman, M.D., Lawrence, Kan. Organized 1869. Incorporated 1870. Members, 63; admitted last year, 4. Annual dues, $1.00. Delegates, Charles Lowry, M.D., C. F. Menninger, M.D. "By request of the State Board of Health, committees from this society and from the Kansas Medical, and Kansas Eclectic Medical, conferred together and called the annual meetings for 1898 at Topeka, May 4 to 6. On the first evening, Wednesday, the three societies had a union meeting in Representative Hall; one paper was read by a member of each society; the subjects were of common interest. The experiment was so satisfactory that all three societies took action toward arranging for a similar joint meeting in 1899."

Kentucky State Homœopathic Medical Society. The annual meeting is held in different places in the State each year, on the second Tuesday in May. President, H. S. Keller, M.D., Frankfort, Ky.; Secretary, H. E. Griffith, M.D., Henderson, Ky. Organized 1886. Incorporated 1886. Members, 59; admitted last year, 7. Annual dues, $2.00. Delegates, Allison Clokey, M.D., Malcolm Dills, M.D.

Hahnemann Medical Association of Louisiana. The annual meeting is held in New Orleans in January. President, C. J. Lopez, M.D., 828 Canal Street, New Orleans, La.; Secretary, Charles R. Mayer, M.D., 1032 South Charles Avenue, New Orleans, La. Members, 16; admitted last year, 2; died last year, 1. Annual dues, $3.00. Delegates, Charles R. Mayer, M.D., J. G. Aiken, M.D.

Maine Homœopathic Medical Society. The annual meeting is held in different places each year, on the first Tuesday in June. President, W. Scott Hill, M.D., Augusta, Me.; Secretary, Cora M. Johnson, M.D., Skow-

hegan, Me. Organized 1867. Incorporated 1867. Number of members, 75; admitted last year, 5; died last year, 1. Annual dues, $2.00. Delegates, W. Scott Hill, M.D., W. E. Fellows, M.D.

Maryland Homœopathic Medical Society. The annual meeting is held in Baltimore, on the third Tuesday in May. President, Charles Leslie Rumsey, M.D., 819 Park Avenue, Baltimore, Md.; Secretary, William Dulaney Thomas, M.D., 611 Carrollton Avenue, Baltimore, Md. Organized 1875. Incorporated 1875. Members, 60; admitted last year, 4; died last year, 1. Annual dues, $2.00. Publishes its annual "Transactions." "There is an evident increase of interest in our Society."

Massachusetts Homœopathic Medical Society. The annual meeting is held in Boston, on the second Wednesday in April. The semi-annual meeting is held in Boston, on the second Wednesday in October. President, Herbert C. Clapp, M.D., 334 Commonwealth Avenue, Boston; Secretary, Frank C. Richardson, M.D., 601 Boylston Street, Boston. Organized 1840. Incorporated 1856. Members, 300; admitted last year, 14; died last year, 2. Publishes its annual volume of "Transactions." Delegates, George S. Adams, M.D., J. Wilkinson Clapp, M.D., I. Tisdale Talbot, M.D., N. Emmons Paine, M.D. "The routine management of the society is intrusted to its Executive Committee, consisting of the elective officers, which holds regular quarterly meetings on the third Wednesday of April, July, October, and January, and special meetings as the occasion may require. The society has had an average attendance of 125 at its meetings during the past year. Its treasury is in such condition as to warrant the appropriation of $1,000, the interest of which is to be devoted to prizes, or such other use as the Executive Committee may determine. Among the important actions of the society during the year may be mentioned the revision of its by-laws, the adoption of a system of balloting by mail, in order that all may have a voice in the election of officers, and the resumption of the publication of an annual volume of 'Transactions.'"

Homœopathic Medical Society of the State of Michigan. The annual meeting is held in different places in the State each year, on the third Tuesday in May. President, Charles S. Morley, M.D., Detroit, Mich.; Secretary, Maria W. Norris, M.D., Grand Rapids, Mich. Organized 1869. Incorporated 1869. Members, 103; admitted last year, 18. Annual dues, $2.00. Publishes various papers in the *Medical Counsellor*. Delegates, M. S. Sinclair, M.D., Daniel A. MacLachlan, M.D.

Minnesota State Homœopathic Institute. The annual meeting is held alternately each year in St. Paul and Minneapolis. President, E. L. Mann, M.D., St. Paul, Minn.; Secretary, Henry C. Aldrich, M.D., 313 Medical Block, Minneapolis, Minn. Organized 1867. Not incorporated. Members, 87; admitted last year, 6. Annual dues, $2.00.

Missouri Institute of Homœopathy. The annual meeting is held alternately each year in St. Louis and Kansas City, on the third Tuesday in April. President, F. W. Glover, M.D., Carthage, Mo.; Secretary, Willis B. Young, M.D., 2620 Park Avenue, St. Louis, Mo. Organized 1876. Not incorporated. Members, 300; admitted last year, 12; died last year, 2. Annual dues, $2.00. Delegates, Frank Elliott, M.D., T. Griswold Comstock, M.D.

Nebraska State Homœopathic Medical Society. The annual meeting is held alternately each year in Omaha and Lincoln. President, George H. Neal, M.D., Falls City, Neb.; Secretary, P. C. Moriarty, M.D., 320 Bee Building, Omaha, Neb. Organized 1875. Incorporated 1883. Members, 67; admitted last year, 7. Annual dues, $1.00.

Homœopathic Medical Society of the State of New Hampshire. The annual meeting is held in Concord, on the third Wednesday in June. President, F. D. Worcester, M.D., Keene, N. H.; Secretary, Channing Bishop, M.D., Bristol, N. H. Organized 1853. Incorporated 1853. Members, 65; admitted last year, 5. Annual dues, $1.00.

New Jersey Homœopathic Medical Society. The annual meeting is held alternately each year at Newark and Trenton, on the first Tuesday in May. The semi-annual meeting is held at different places each year, in October. President, Edwin J. Howe, M.D., 985 Broad Street, Newark, N. J.; Secretary, C. Herbert Church, M.D., Nutley, N. J. Organized 1854. Incorporated 1870. Members, 165; admitted last year, 5. Annual dues, $2.00. Delegates, T. Y. Kinne, M.D., M. F. Middleton, M.D.

Homœopathic Medical Society of the State of New York. The annual meeting is held in Albany, on the second Tuesday and Wednesday in February. The semi-annual meeting is held in different places each year, in September. President, Arthur B. Norton, M.D., 16 West Forty-fifth Street, New York City; Secretary, John L. Moffat, M.D., 17 Schermerhorn Street, Brooklyn, N. Y. Organized 1850. Incorporated 1862. Members, 504; admitted last year, 26; died last year, 10. Publishes its annual volume of "Transactions." Delegates, J. M. Lee, M.D., Eugene H. Porter, M.D.

Homœopathic Medical Society of Ohio. The annual meeting is held in different places, on the second Tuesday and Wednesday in May. No report.

Homœopathic Medical Society of the State of Oregon. The annual meeting is held in Portland, on the second Tuesday in June. No report.

Homœopathic Medical Society of State of Pennsylvania. The annual meeting is held in different places each year, in September. President, William H. Keim, M.D., 1716 North Eighteenth Street, Philadelphia, Pa.; Secretary, Edward M. Gramm, M.D., 709-710 Professional Building, 1,833 Chestnut Street, Philadelphia, Pa. Organized 1886. Incorporated 1896. Members, 322; admitted last year, 12; died last year, 2. Annual dues, $5.00. Publishes its annual volume of its "Transactions." Delegates, J. U. Coolidge, M.D., James H. McClelland, M.D., Charles Mohr, M.D.

Rhode Island State Homœopathic Medical Society. The annual meeting is held in Providence, on the second Friday in January. President, Sayer Hasbrouck, M.D., 117 Broad Street, Providence, R. I.; Secretary, John H. Bennett, M.D., 255 High Street, Pawtucket, R. I. Organized 1850. Incorporated 1850. Members, 45; admitted last year, 3; died last year, 1. Annual dues, $5.00.

Homœopathic Medical Society of South Dakota. The annual meeting is held in different places each year, on the second Thursday in June. President, J. A. Barker, M.D., Mitchell, S. Dak.; Secretary, William Lowe, M.D., Madison, S. Dak. Organized 1893. Not incorporated. Members, 45. Annual dues, $2.00.

Homœopathic Medical Society of the State of Tennessee. The annual meeting is held in different places each year. President, Douglass Caulkins, M.D., Knoxville, Tenn.; Secretary, E. Harper, M.D., Knoxville, Tenn. Annual dues, $1.00.

Texas Homœopathic Medical Association. No report.

Utah Homœopathic Medical Association. The annual meeting is held in Salt Lake City, on the first Tuesday in May. President, Isaiah White, M.D., 29 State Street, Salt Lake City, Utah; Secretary, John T. White, M.D., 29 State Street, Salt Lake City, Utah. Organized 1854. Incorporated 1858. Members, 14. Annual dues, $1.00. There has been no meeting held for the last three years.

Vermont Homœopathic Medical Society. The annual meeting is held in Montpelier, on the third Wednesday in May. President, W. H. Weeks, M.D., East Hardwick, Vt.; Secretary, George I. Forbes, M.D., Burlington, Vt. Organized 1854. Incorporated 1858. Members, 55; admitted last year, 5. Annual dues, $2.00. Publishes an annual volume of its "Transactions." Delegates, Charles A. Gale, M.D., G. E. E. Sparhawk, M.D.

Hahnemann Medical Society of the Old Dominion. The annual meeting is held in Richmond, in October. President, Frank P. Webster, M.D., Norfolk, Va.; Secretary, H. C. Corey, M.D., 312 West Grace Street, Richmond, Va. Organized 1880. Not incorporated. Members, 21; admitted last year, 1. Annual dues, $1.00.

Washington State Homœopathic Medical Society. The annual meeting is held in different places each year, on the second Thursday in June. No report.

Homœopathic Medical Society of the State of Wisconsin. The annual meeting is held in different places each year, on the second Wednesday in May. President, F. P. Stiles, M.D., Sparta, Wis.; Secretary, Filip A. Forsbeck, M.D., 425 Milwaukee Street, Milwaukee, Wis. Organized 1865. Incorporated 1868. Members, 85; admitted last year, 6; died last year, 2. Annual dues, $2.00. Publishes its "Transactions" in the Minneapolis Homœopathic Magazine. Delegates, Lewis Sherman, M.D., N. A. Pennoyer, M.D., Richard K. Payne, M.D.

Local Societies.

California.

Alameda County Homœopathic Medical Society. The annual meeting is held in Oakland, on the second Tuesday in October of each year. Monthly meetings are held in the same place, on the second Tuesday of each month. President, J. E. Nicholson, M.D., Oakland, Cal.; Secretary, N. H. Chamberlain, M.D., Oakland, Cal. Organized 1877. Not incorporated. Number of members, 21; admitted last year, 1. Annual dues, $1.00.

San Diego Homœopathic Medical Society. The annual meeting is held in San Diego, on the third Wednesday in December. Monthly meetings are held in the same place, on the third Wednesday of each month. President, S. Evaline Bailey, M.D., Seventh and F Streets, San Diego, Cal.; Secretary, Thomas Docking, M.D., 164 Boston Avenue, San Diego, Cal. Or-

ganized 1889. Not incorporated. Number of members, 15. Annual dues, $2.00. Publishes various reports in the journals. Delegate, Edward Grove, M.D.

San Francisco Homœopathic Medical Society. The annual meeting is held in San Francisco, on the first Monday in December. Monthly meetings are held in the same place, on the first Monday of each month. President, Sidney Worth, M.D., 606 Sutter Street, San Francisco, Cal.; Secretary, Guy E. Manning, M.D., 383 Geary Street, San Francisco, Cal. Organized 1893. Not incorporated. Number of members, 45. Annual dues, $1.00.

Southern California Homœopathic Medical Society. The annual meeting is held in Los Angeles or some other city in Southern California, on the second Wednesday in October of each year. President, E. A. Clarke, M.D., Los Angeles, Cal.; Secretary, F. S. Barnard, M.D., 206 Bradbury Building, Los Angeles, Cal. Organized 1890. Incorporated 1892. Number of members, 66; admitted last year, 3. Annual dues, $2 00. The *Pacific Coast Journal of Homœopathy* has been the official organ of the society.

Homœopathic Hospital Association of Southern California. The annual meeting is held in Los Angeles, on the first Tuesday in March of each year. Meetings are held monthly in the same place. President, James Foord, Devon Inn, Los Angeles, Cal.; Secretary, S. S. Salisbury, M.D., Bradbury Block, Los Angeles, Cal. Organized 1895. Incorporated 1895. Number of members, 23; admitted last year, 13. Annual dues, $5.00. Delegate, F. S. Barnard, M.D.

Connecticut.

Bridgeport Homœopathic Medical Society. The annual meeting is held in Bridgeport, on the third Tuesday of September of each year. Monthly meetings are held in the same place, on the third Tuesday of each month. President, Edward S. Smith, M.D., 313 State Street, Bridgeport, Conn.; Secretary, David W. Ingalls, M.D., 309 State Street, Bridgeport, Conn. Organized 1894. Not incorporated. Number of members, 13; admitted last year, 2. Annual dues, $1.00.

District of Columbia.

Washington Homœopathic Medical Society. No report.

Illinois.

Clinical Society of Hahnemann Hospital of Chicago. The annual meeting is held in Chicago, on the last Saturday in April of each year. Monthly meetings are held in the same place, on the last Saturday of each month. President, Alexander K. Crawford, M.D., 100 State Street, Chicago, Ill.; Secretary, Cornelia S. Stettler, M.D., 181 Dearborn Avenue, Chicago, Ill. Organized 1877. Not incorporated. Number of members, 150; admitted last year, 20. Annual dues, $1.00. Publishes its "Transactions" in the *Clinique*. Delegate, Orrin L. Smith, M.D. "Only two of the monthly meetings have been missed in twenty-one years."

Englewood Homœopathic Medical Society. The annual meeting is held in Englewood in May. Semi-monthly meetings are held in the same place. President, H. F. Smith, M.D., 7,814 Hawthorne Avenue, Chicago, Ill.; Secretary, C. F. Ingersoll, M.D., 654 West Sixty-first Street, Chicago, Ill. Organized 1890. Not incorporated. Number of members, 30; admitted last year, 6. Annual dues, $1.00. Has published many reports in the journals. Delegate, Howard Crutcher, M.D.

Homœopathic Medical Society of Chicago. The annual meeting is held in Chicago, on the third Thursday in June of each year. Monthly meetings are held in the same place, on the third Thursday of each month. President, Samuel P. Hedges, M.D., 890 Evanston Avenue, Chicago, Ill.; Secretary, Wilson A. Smith, M.D., 7,022 Vernon Avenue, Chicago, Ill. Organized 1894. Not incorporated. Number of members, 76; admitted last year, 14. Annual dues, $2.00. Has published various papers in different journals, mostly *Medical Era* and *Medical Visitor*. Delegate, Alexander K. Crawford, M.D.

Northwestern Homœopathic Medical Society. The annual meeting is held alternately in Rockford and Freeport, on the first Tuesday in September of each year. Monthly meetings are held in the same places, on the first Tuesday in each month. President, W. R. Franklin, M.D., Rockford, Ill.; Secretary, Katherine E. James, M.D., Rockford, Ill. Organized 1895. Incorporated 1895. Number of members, 37; admitted last year, 6. Annual dues, $1.00.

Rock River Institute of Homœopathy. The annual meeting is held in Dixon, Ill., on the first Wednesday in October of each year. Quarterly meetings are held in different places, on the first Wednesday in January, April, July, and October. President, O. B. Blackman, M.D., Dixon, Ill.; Secretary, A. W. Blunt, M.D., Clinton, Iowa. Organized 1881. Not incorporated. Number of members, 18; admitted last year, 2. Annual dues, 50 cents. Delegate, A. W. Blunt, M.D.

Indiana.

Evansville Homœopathic Medical Society. The annual meeting is held in Evansville, on the first Tuesday in May of each year. Monthly meetings are held in the same place, on the first Tuesday of each month. President, T. H. Taylor, M.D., corner Second and Main Streets, Evansville, Ind.; Secretary, Carl G. Vishe, M.D., 311½ Upper Third Street, Evansville, Ind. Organized 1894. Not incorporated. Number of members, 16; admitted last year, 1; died last year, 1. Annual dues, $2.00. "Have had extra good meetings during the last year." Delegate, F. L. Davis, M.D.

Northern Indiana and Southern Michigan Homœopathic Medical Association. The annual meeting is held in Elkhart, Ind., on the fourth Tuesday in April of each year. Semi-annual meeting is held in different places each year. President, T. C. Buskirk, M.D., White Pigeon, Mich.; Secretary, H. A. Mumaw, M.D., Elkhart, Ind. Organized 1891. Not incorporated. Number of members, 64; admitted last year, 9; died last year, 3. Annual dues, $1.00. Publishes its "Transactions." Delegate, Temple S. Hoyne, M.D.

Iowa.

Central Homœopathic Association of Iowa. The annual meeting is held in Cedar Rapids, Iowa, on the second Wednesday of July of each year. The semi-annual meeting is held in different places each year. President, A. L. Pollard, M.D., Iowa City, Iowa; Secretary, Milton Rice, M.D., Cedar Rapids, Iowa. Organized 1878. Incorporated 1879. Number of members, 38; admitted last year, 2. Delegate, R. S. Herser, M.D.

Des Moines Homœopathic Medical Society. The annual meeting is held in Des Moines, Iowa, on the first Monday in January of each year. Monthly meetings are held in the same place, on the first Monday in each month. President, George Royal, M.D., 500 Walnut Street, Des Moines, Iowa; Secretary, William Woodburn, M.D., 609 Walnut Street, Des Moines, Iowa. Organized 1883. Not incorporated. Number of members, 18; admitted last year, 3.

Northeastern Iowa Homœopathic Medical Society. No report.

Northwest Iowa Homœopathic Medical Society. The annual meeting is held in different places each year in June. President, Samuel B. Hoskins, M.D., Sioux City, Iowa; Secretary, D. A. Fletcher, M.D., Hartley, Iowa. Organized 1897. Not incorporated. Number of members, 49; admitted last year, 49. Delegate, Samuel B. Hoskins, M.D. "The society is prospering, with a very bright future."

Sioux City Homœopathic Medical Association. The annual meeting is held in Sioux City, Iowa, on the first Monday in December. Monthly meetings in the same place, on the first Monday in each month. President, John Bailey, M.D., Sioux City, Iowa; Secretary, S. B. Hoskins, M.D., Sioux City, Iowa. Organized 1889. Not incorporated. Number of members, 26; admitted last year, 4. Annual dues, $1.00.

Kansas.

Shawnee County Homœopathic Medical Society. No report.

Kentucky.

Falls Cities Homœopathic Medical Society. The annual meeting is held in Falls Cities. Monthly meetings are held in different places. President, Charles A. Mayer, M.D., Louisville, Ky.; Secretary, F. C. Askenstedt, M.D., Louisville, Ky. Organized 1897. Not incorporated. Number of members, 20.

Kenton County Clinical Society. The annual meeting is held in Covington, Ky. Monthly meetings are held in the same place. President, William M. Murphy, M.D., 106 East Eighth Street, Covington, Ky.; Secretary, J. A. Davis, M.D., 723 Madison Avenue, Covington, Ky. Organized 1896. Not incorporated. Number of members, 7; admitted last year, 2. Delegate, William F. Reilly, M.D.

Maryland.

Homœopathic Clinical Society of Maryland and District of Columbia, Maryland Branch. The annual meeting is held in Baltimore, on the sec-

ond Friday in May of each year. Monthly meetings are held in the same place, on the second Friday in each month. President, Barrett C. Catlin, M.D., 1625 Linden Avenue, Baltimore, Md.; Secretary, William M. Panebaker, M.D., 1103 Linden Avenue, Baltimore, Md. Organized 1899. Not incorporated. Number of members, 34. Annual dues, $1.00.

Massachusetts.

Alumni Association of the Boston University School of Medicine. The annual meeting is held in Boston on Commencement Day. President, Charles Holt Thomas, M.D., 427 Broadway, Cambridge, Mass.; Secretary, Frank E. Allard, M.D., 39 Hancock Street, Boston, Mass. Organized 1874. Not incorporated. Number of members, 686; admitted last year, 30; died last year, 2. Publishes the *Bulletin of Medical Instruction*. Delegate, Charles H. Thomas, M.D.

Boston Homœopathic Medical Society. The annual meeting is held in Boston, on the first Thursday in January. Monthly meetings are held in the same place, on the first Thursday in each month. President, John L. Coffin, M.D., 229 Berkeley Street, Boston, Mass.; Secretary, Frank E. Allard, M.D., 39 Hancock Street, Boston, Mass. Organized 1840. Incorporated 1856. Number of members, 266; admitted last year, 18; died last year, 3. Annual dues, $2.00. Publishes "Boston Homœopathic Medical Society Year Book." Delegate, N. Emmons Paine, M.D.

Essex County Homœopathic Medical Society. The annual meeting is held in Salem, in October. Meetings are held monthly in Lynn and Salem alternately. President, C. S. Stanley, M.D., Amesbury, Mass.; Secretary, C. W. Morse, M.D., Salem, Mass. Organized 1871. Not incorporated. Number of members, 44; admitted last year, 4; died last year, 2. Annual dues, $1.00.

Massachusetts Surgical and Gynæcological Society. The annual meeting is held in Boston, on the second Wednesday in December of each year. Semi-annual meeting is held in the same place, on the second Wednesday of June of each year. President, Horace Packard, M.D., 470 Commonwealth Avenue, Boston, Mass.; Secretary, H. H. Houghton, M.D., 845 Boylston Street, Boston, Mass. Organized 1877. Not incorporated. Number of members, 203; admitted last year, 6; died last year, 5. Annual dues, $2.00.

Homœopathic Medical Society of Western Massachusetts. Annual meeting is held in Springfield, on the third Wednesday in March of each year. Quarterly meetings are held in the same place, on the third Wednesdays in June, September, and December. President, W. P. Wentworth, M.D., Lee, Mass.; Secretary, Alice E. Rowe, M.D., Springfield, Mass. Organized 1877. Incorporated 1877. Number of members, 53; admitted last year, 3. Delegate, Edward B. Hooker, M.D.

Worcester County Homœopathic Medical Society. The annual meeting is held in Worcester, on the second Wednesday in November of each year. Quarterly meetings are held in the same place, on the second Wednesdays of February, May, and August. President, George S. Adams, M.D., Westboro, Mass.; Secretary, Frank R. Warren, M.D., 68 Pleasant Street, Worcester, Mass. Organized 1866. Not incorporated. Number of

members, 72; admitted last year, 2. Annual dues, $1.00. Delegate, F. T. Harvey, M.D.

Michigan.

Alumni Association of the Homœopathic College of the University of Michigan. No report.

Homœopathic Medical Society of Southwestern Michigan. The annual meeting is held in Kalamazoo, Mich., on the first Tuesday in February. Bi-monthly meetings are held in the same place, on the first Tuesdays in April, June, August, October, and December. President, A. B. Cornell, M.D., Kalamazoo, Mich.; Secretary, Nancy B. Sherman, M.D., Kalamazoo, Mich. Number of members, 25. "Pulse and respiration apparently nil, but where there is life there is hope; pray for us."

Saginaw Valley Homœopathic Association. No report.

Detroit Homœopathic Practitioner's Society. No report.

Minnesota.

St. Paul Society of Homœopathic Medicine and Surgery. The annual meeting is held in St. Paul, on the first Monday in October of each year. Monthly meetings are held in the same place, on the first Monday in each month. President, S. G. Cobb, M.D., 1852 Marshall Avenue, St. Paul, Minn.; Secretary, Eugene Hubbell, M.D., 138 East Sixth Street, St. Paul, Minn. Organized 1880. Not incorporated. Number of members, 22; admitted last year, 3.

Missouri.

St. Joseph's Homœopathic Medical Society. The annual meeting is held in St. Joseph, on the second Saturday in December. Monthly meetings are held in the same place, on the second Saturday in each month. President, H. W. Westover, M.D., St. Joseph, Mo.; Secretary, F. P. Miles, M.D., St. Joseph, Mo. Numbers of members, 18; admitted last year, 18. Annual dues, $1.00. Delegate, H. W. Westover, M.D.

St. Louis Homœopathic Medical Society. The annual meeting is held on the second Saturday in October. Semi-monthly meetings are held in the same place, on the second and fourth Saturdays of each month, from October to June inclusive. President, W. John Harris, M.D., 3514 Lucas Avenue, St. Louis, Mo.; Secretary, G. N. Seidlitz, M.D., 3333 Lucas Avenue, St. Louis, Mo. Organized 1886. Incorporated 1886. Number of members, 40; admitted last year, 6; died last year, 1. Annual dues, $2.00.

Nebraska.

Omaha Homœopathic Medical Society. No report.

New Jersey.

West New Jersey Homœopathic Medical Society. The annual meeting is held in Camden, N. J., on the third Wednesday in May. Quarterly meetings are held in the same place, on the third Wednesdays of August.

November, and February. President, Harrison B. Hall, M.D., Riverton, N. J.; Secretary, Wallace McGeorge, M.D., 521 Broadway, Camden, N. J. Organized 1869. Not incorporated. Number of members, 52; admitted last year, 4; died last year, 2. Annual dues, $1.00. Has published numerous papers in different journals. Delegate, Oscar L. Grumbrecht, M.D.

New York.

Alumni Association of the New York Medical College and Hospital. The annual meeting is held in New York City, on Commencement Day. President, Charles A. Church, M.D., 128 Prospect Street, Passaic, N. J.; Secretary, William S. Pearsall, M.D., 128 West Seventy-eighth Street, New York City. Organized 1883. Not incorporated. Number of members, 570. Annual dues, $1.00.

Alumni Association of the New York Homœopathic College and Hospital for Women. The annual meeting is held in New York City, on Commencement Day. President, Helene Lassen, M.D., 182 Henry Street, Brooklyn, N. Y.; Secretary, Anne Langwonley, M.D., 446 East Seventy-second Street, New York City. Number of members, 244; admitted last year, 2; died last year, 2. Annual dues, $1.00.

Alumni Association of the Ward's Island and Metropolitan Hospitals. The annual meeting is held on the first Wednesday in December, in New York City. President, Clitus S. Hoag, M.D., Bridgeport, Conn.; Secretary, George Taylor Stewart, M.D., Metropolitan Hospital, Blackwell's Island, New York City. Organized 1896. Not incorporated. Number of members, 78; admitted last year, 8. Annual dues, $1.00.

Albany County Homœopathic Medical Society. The annual meeting is held in Albany, on the second Tuesday in January. Quarterly meetings are held in the same place, on the second Tuesdays in April, July, and October. President, Edward G. Cox, M.D., 261 State Street, Albany, N. Y.; Secretary, Arthur B. Van Loon, M.D., 50 Eagle Street, Albany, N. Y. Organized 1861. Incorporated 1861. Number of members, 43; admitted last year, 3. Annual dues, $2.00.

Brooklyn Hahnemannian Union. The annual meeting is held in Brooklyn, on the last Saturday evening in January. Monthly meetings are held in the same place, on the last Saturday evening of each month. The President is chosen at each meeting. Secretary, Mrs. Evangeline Lewis Close, LG.U., 641 Willoughby Avenue, Brooklyn, N. Y. Organized 1896. Number of members, 10. "Some of the monthly papers by the members have been published in the *Homœopathic Physician*. The society made an extensive proving of the X-Ray, which was published in the 'Transactions' of the I. H. A."

Broome County Homœopathic Medical Society. No report.

Chenango County Homœopathic Medical Society. The annual meeting is held in Norwich, on the third Tuesday in January of each year. The semi-annual meeting is held in different places each year, on the third Tuesday in June. President, R. E. Miller, M.D., Oxford, N. Y.; Secretary, F. E. Roper, M.D., Norwich, N. Y. Organized 1871. Incorporated 1872. Number of members, 6; admitted last year, 1. Annual dues, $1.00.

Central New York Homœopathic Medical Society. The annual meet-

ing is held in Syracuse, on the third Thursday in September of each year. Meetings are held quarterly, alternating between Syracuse and Rochester, on the third Thursdays of December, March, and June. President, William M. Fallett, M.D., Seneca Falls, N. Y.; Secretary, S. H. Guild-Leggett, M.D., Syracuse, N. Y. Organized 1865. Incorporated 1866. Number of members, 43; admitted last year, 1; died last year, 2. Annual dues, $1.00. Has published its "Transactions" in the *Hahnemannian Advocate.*

Dutchess County Homœopathic Medical Society. The annual meeting is held in Poughkeepsie, on the third Tuesday in May of each year. The semi-annual meeting is held in the same place, on the third Tuesday in October of each year. President, C. E. Lane, M.D., 289 Mill Street, Poughkeepsie; Secretary, Anna C. Howland, M.D., 351 Main Street, Poughkeepsie, N. Y. Organized 1860. Incorporated 1868. Number of members, 12; admitted last year, 1. Annual dues, $1.00. "Just manage to live." Delegate, G. H. Otis, M.D.

The Hahnemann Association. The annual meeting is held in New York City, in November of each year. President, George G. Stelton, M.D., 521 Madison Avenue, New York City; Secretary, George W. McDowell, M.D., 136 West 130th Street, New York City. Organized 1894. Not incorporated. Number of members, 400.

Homœopathic Medical Society of the County of Kings. The annual meeting is held in Brooklyn, on the second Tuesday in January of each year. Monthly meetings are held in the same place, on the second Tuesday in each month. President, J. Freeman Atwood, M.D., 149 Greene Avenue, Brooklyn, N. Y.; Secretary, E. Rodney Fiske, M.D., 484 Bedford Avenue, Brooklyn, N. Y. Organized 1857. Incorporated 1857. Number of members, 160; admitted last year, 21. Annual dues, $2.00.

Homœopathic Medical Society of the County of New York. The annual meeting is held in New York City, on the second Thursday in December of each year. Monthly meetings are held in the same place, on the second Thursday of each month. President, John B. Garrison, M.D., 111 East Seventieth Street, New York City; Secretary, H. Worthington Paige, M.D., 256 West Fifty-seventh Street, New York City. Organized 1857. Incorporated 1858. Number of members, 269; admitted last year, 7; died last year, 3. Annual dues, $3.00. Has published various papers in different journals.

Interstate Homœopathic Medical Association. The annual meeting is held in Binghamton, on the second Tuesday in May of each year. The semi-annual meeting is held in Scranton, Pa., on the second Tuesday in October of each year. President, F. W. Lange, M.D., Scranton, Pa.; Secretary, Charles S. Winters, M.D., Binghamton, N. Y. Organized 1891. Not incorporated. Number of members, 58; admitted last year, 5; died last year, 2. Annual dues, $2.00. Has published two papers.

Jamestown Homœopathic Medical Society. The annual meeting is held in Jamestown, on the second Tuesday in January of each year. Meetings are held monthly in same place, on the second Tuesday in each month. President, A. F. Ward, M.D., Jamestown, N. Y.; Secretary, A. B. Rice, M.D., Jamestown, N. Y. Organized 1894. Not incorporated. Number of members, 8. Delegate, Francis D. Orme, M.D.

Jefferson County Homœopathic Medical Society. No report.

Homœopathic Medical Society of Madison County. The annual meeting is held in Oneida, on the first Tuesday in October of each year. Meetings are held semi-annually. President, B. R. Gifford, M.D., Madison, N. Y.; Secretary, J. T. Wallace, M.D., 55 Main Street, Oneida, N. Y. Organized 1865. Not incorporated. Number of members, 8.

Medico-Chirurgical Society of Central New York. The annual meeting is held in Syracuse, on the first Thursday in June of each year. The semi-annual meeting is held in different places each year. President, Walter E. Deuel, M.D., Chittenango, N. Y.; Secretary, E. Elmer Keeler, M.D., 452 South Salina Street, Syracuse, N. Y. Organized 1896. Not incorporated. Number of members, 50; admitted last year, 7; died last year, 1. Annual dues, $1.00. Has published various articles in different journals. "Short papers, lively discussions, our rule."

Monroe County Homœopathic Medical Society. The annual meeting is held in Rochester, on the third Tuesday in January of each year. Quarterly meetings are held in the same place, on the third Tuesdays in April, July, and October. President, William A. Keegan, M.D., 40 South Clinton Street, Rochester, N. Y.; Secretary, Thomas Parsons, M.D., 33 South Clinton Street, Rochester, N. Y. Organized 1866. Incorporated 1894. Number of members, 44; admitted last year, 4. Annual dues, $2.00.

Montgomery County Homœopathic Medical Society. No report.

New York Pædological Society, Homœopathic. The annual meeting is held in New York City, on the third Wednesday in October of each year. Monthly meetings are held in the same place, on the third Wednesday of each month. President, Byron G. Clark, M.D., 162 West 122d Street, New York City; Secretary, J. Perry Seward, M.D., 113 West Eighty-fifth Street, New York City. Organized 1891. Not incorporated. Number of members, 83; admitted last year, 6. Annual dues, $1.00.

Oneida and Herkimer Counties Homœopathic Medical Society. No report.

Onondaga County Homœopathic Medical Society. No report.

Ontario County Homœopathic Medical Society. The annual meeting is held in Canandaigua, on the third Wednesday in October of each year. Semi-annual meeting is held in Clifton Springs, in June of each year. President, James C. Knapp, M.D., Geneva, N. Y.; Secretary, Charles T. Mitchell, M.D., Canandaigua, N. Y. Organized 1861. Not incorporated. Number of members, 13. Annual dues, $1.00. No meetings have been held for the past three years.

Oswego County Homœopathic Medical Society. The annual meeting is held in Oswego, on the second Tuesday in June of each year. The semi-annual meeting is held in the same place, on the second Tuesday in December of each year. President, T. Dwight Stowe, M.D., Mexico, N. Y.; Secretary, L. B. Richards, M.D., Oswego, N. Y. Organized 1861. Not incorporated. Number of members, 8; died last year, 1. Annual dues. $1.00. Delegate, L. B. Richards, M.D.

Seneca County Homœopathic Medical Society. The annual meeting is held in Waterloo, on the first Thursday in October of each year. The semi-annual meeting is held at a different place each year, on the first Thursday in June. President, A. Horton, Ovid, N. Y.; Secretary, O. W. Peterson, M.D. Organized 1872. Incorporated 1873. Number of mem-

bers, 8; admitted last year, 1. Annual dues, $1.00. Delegate, O. W. Peterson, M.D.

Southern Tier Homœopathic Medical Society. The annual meeting is held in Corning, on the third Tuesday in January of each year. Quarterly meetings are held in Elmira, on the third Tuesdays of April, July, and October. President, W. H. Hilton, M.D., Waverly, N. Y.; Secretary, E. H. Noble, M.D., 332 East Water Street, Elmira, N. Y. Organized 1874. Incorporated 1898. Number of members, 26; admitted last year, 3; died last year, 1. Annual dues, $1.00.

Wayne County Homœopathic Medical Society. The annual meeting is held in different places each year, on the first Tuesday in June. President, W. L. Hartman, M.D., Clyde, N. Y.; Secretary, W. H. Sweeting, Savannah, N. Y. Organized 1865. Not incorporated. Number of members, 12. Annual dues, $1.00. The society has held no meetings for the past three years.

Westchester County Homœopathic Medical Society. The annual meeting is held in Yonkers, on the last Wednesday in January of each year. The semi-annual meeting is held in different places each year, on the last Wednesday in June. President, Russell P. Fay, M.D., 165 Warburton Avenue, Yonkers, N. Y.; Secretary, Horace G. Keith, M.D., 107 South Broadway, Yonkers, N. Y. Organized 1865. Incorporated 1865. Number of members, 31; died last year, 1. Annual dues, $1.00. Delegate, R. B. Trotter, M.D.

Western New York Homœopathic Medical Society. The annual meeting is held alternately in Buffalo and Rochester, on the second Friday in April of each year. Quarterly meetings are held in different places on the second Fridays of July, October, and January. President, P. W. Neefus, M.D., 124 East Avenue, Rochester, N. Y.; Secretary, William D. Young, M.D., 29 Park Street, Buffalo, N. Y. Organized 1885. Not incorporated. Number of members, 153; admitted last year, 23; died last year, 1. Annual dues, $1.00. Has published two pamphlets, "The Real Value of Homœopathy," by C. E. Fisher, M.D., and "Clinical Confirmations," by Asa S. Couch, M.D.

Ohio.

Alumni Association of Pulte Medical College. The annual meeting is held in Cincinnati, on Commencement Day. President, James Wa. Overpeck, M.D., Hamilton, Ohio; Secretary, H. H. Wiggers, M.D., 529 Everett Street, Cincinnati, Ohio. Organized 1878. Not incorporated. Number of members, 1,500; admitted last year, 5. Annual dues, $1.00.

Cincinnati Homœopathic Medical Lyceum. The annual meeting is held in Cincinnati, on the first Monday in October of each year. Semimonthly meetings are held in the same place, on the first and third Mondays of each month. President, H. H. Wiggers, M.D., 529 Everett Street, Cincinnati, Ohio; Secretary, C. H. Struble, M.D., Dayton, Ky. Organized 1889. Not incorporated. Number of members, 45; admitted last year, 6; died last year, 1. Annual dues, $1.00. Has published various papers written by members of the Lyceum. Delegate, Thomas M. Stewart, M.D.

Cleveland Homœopathic Medical Society. No report.

Columbus Homœopathic Medical Society. The annual meeting is held in Columbus, on the first Monday in December of each year. Semi-monthly meetings are held in the same place, on the first and third Mondays of each month. President is appointed at each meeting. Secretary, H. W. Stuckey, M.D., 200 East State Street, Columbus, Ohio. Organized 1897. Not incorporated. Number of members, 22; admitted last year, 22.

Dayton Homœopathic Medical Society. The annual meeting is held in Dayton, on the first Monday in March of each year. Semi-monthly meetings are held on the first and third Mondays of each month, in the same place. President, F. W. Murphy, M.D., Dayton, Ohio; Secretary, C. W. Ginn, M.D., Dayton, Ohio. Number of members, 15; admitted last year, 1. Annual dues, $3.00. Have published various papers.

Homœopathic Medical Society of Eastern Ohio. No report.

Miami Valley Homœopathic Medical Society. The annual meeting is held in Dayton, on the last Thursday in April of each year. Semi-annual meeting is held in different places each year, on the last Thursday in October. President, J. H. Wilson, M.D., Bellefontaine, Ohio; Secretary, W. Webster Ensey, M.D., 122 South Ludlow Street, Dayton, Ohio. Organized 1860. Incorporated 1870. Number of members, 101; admitted last year, 15; died last year, 2. A number of the papers read at the meetings were published in different medical journals. Delegates, Charles E. Sawyer, M.D., Frank D. Bittinger, M.D.

Summit County Clinical Society. The annual meeting is held in Akron, on the first Tuesday in January of each year. Monthly meetings are held in the same place, on the first Tuesday in each month. President, C. A. Dixon, M.D., 1060 South Main Street, Akron, Ohio; Secretary, Katharine Kurt, M.D., 113 South Broadway, Akron, Ohio. Organized 1885. Not incorporated. Number of members, 16; admitted last year, 3.

Pennsylvania.

Alumni Association of Hahnemann College of Philadelphia. The annual meeting is held in Philadelphia, on Commencement Day. President, William R. King, M.D., 1422 K Street, N.W., Washington, D.C.; Secretary, Woodward D. Carter, M.D., 1533 South Fifteenth Street, Philadelphia, Pa. Organized 1857. Not incorporated. Number of members, 1,240; admitted last year, 88; died last year, 8. Has published essays and addresses in different journals.

Allegheny County Homœopathic Medical Society. The annual meeting is held in Pittsburg, on the second Tuesday in December of each year. Monthly meetings are held in the same place, on the second Tuesday of each month. President, William W. Blair, M.D., 407 Penn Avenue, Pittsburg, Pa.; Secretary, George B. Moreland, M.D., 1321 Fifth Avenue, Pittsburg, Pa. Organized 1864. Not incorporated. Number of members, 74; admitted last year, 7; died last year, 2. Annual dues, $2.00.

Erie County Homœopathic Medical Society. The annual meeting is held in Erie. Quarterly meetings are held in the same place. President, J. R. Phillips, M.D., 15 East Eighth Street, Erie, Pa.; Secretary, R. T. Marks, M.D., 252 West Eighteenth Street, Erie, Pa. Organized 1891. Not

incorporated. Number of members, 16. Annual dues, $1.00. Delegate, Edward Cranch, M.D.

Central Homœopathic Medical Society of Pennsylvania. No report.

Homœopathic Medical Society of Chester County. The annual meeting is held in Philadelphia, on the second Tuesday in October of each year. Bi-monthly meetings are held in different places, on the second Tuesdays in December, February, April, June, and August. President, Franklin Powell, M.D., Chester, Pa.; Secretary, Isaac Crowther, M.D., 143 East Seventh Street, Chester, Pa. Organized 1858. Not incorporated. Number of members, 42; admitted last year, 10. Annual dues, $1.00.

Homœopathic Medical Society of Delaware County. The annual meeting is held in different places, on the second Tuesday in May of each year. Bi-monthly meetings are held in different places, on the second Tuesdays in July, September, November, January, and March. The President is chosen at each meeting. Secretary, George C. Webster, M.D., Media, Pa. Organized 1898. Not incorporated. Number of members, 19. Annual dues, $1.00.

Homœopathic Medical Society of Germantown. The annual meeting is held in Germantown, in January of each year. Monthly meetings are held in the same place. President, Thomas Reading, M.D., Hatboro, Pa.; Secretary, James Harwood Closson, M.D., 53 West Chelten Avenue, Germantown, Philadelphia, Pa. Organized 1877. Not incorporated. Number of members, 142; admitted last year, 44. Publishes its "Transactions" in various journals. Delegate, James Harwood Closson, M.D.

Homœopathic Medical Society of Montgomery County. The annual meeting is held in Norristown, on the second Tuesday in May of each year. Bi-monthly meetings are held in different places, on the second Tuesdays in July, September, November, January, and March. President, E. B. Rossiter, M.D., Pottstown, Pa.; Secretary, H. M. Bunting, M.D., Norristown, Pa. Organized 1898. Not incorporated. Number of members, 14. Annual dues, $1.00. "The society is too young yet to show character of work to be done, but we think that we can be of use to Homœopathy, to homœopathic legislation, and to ourselves when we get to singing together."

Homœopathic Medical Society of Lehigh Valley. The annual meeting is held in Easton, on the first Thursday in December of each year. Bi-monthly meetings are held in the same place, on the first Thursdays in February, April, June, August, and October. President, James P. Pursell, M.D., Easton, Pa.; Secretary, Howard A. Fehr, M.D., Allentown, Pa. Organized 1881. Not incorporated. Number of members, 30. Annual dues, $1.00.

Homœopathic Medical Society of Northern Pennsylvania. The annual meeting is held in Scranton, on the third Thursday in June of each year. Bi-monthly meetings are held alternately in Scranton and Wilkesbarre, on the third Thursdays in August, October, December, February, and April. President, H. B. Ware, M.D., Scranton, Pa.; Secretary, Anna C. Clarke, M.D., 426 Adams Avenue, Scranton, Pa. Organized 1880. Not incorporated. Number of members, 30; admitted last year, 4. Annual dues, $2.00.

Homœopathic Medical Society of Philadelphia County. The annual

meeting is held in Philadelphia, on the second Thursday in June of each year. Monthly meetings are held in the same place, on the second Thursday of each month. President, Edward M. Gramm, M.D., 1833 Chestnut Street, Philadelphia, Pa.; Secretary, Weston D. Bayley, M.D., S. E. corner Fifteenth and Poplar Streets, Philadelphia, Pa. Organized 1886. Not incorporated. Number of members, 273; admitted last year, 13. Annual dues, $1.00. Delegates, William W. VanBaun, M.D., William B. VanLennep, M.D.

Homœopathic Medical Society of Twenty-third Ward of Philadelphia. The annual meeting is held in different places, on the third Wednesday in October. Monthly meetings are held at different places, on the third Wednesday in each month. President, C. Lewis, M.D., Holmesburg, Philadelphia, Pa.; Secretary, Charles Becker, M.D., 1902 Tioga Street, Philadelphia, Pa. Organized 1881. Not incorporated. Number of members, 25; admitted last year, 4. Annual dues, $1.50. Has published various papers in the different journals. Delegates, Chandler Weaver, M.D., Milton C. Powell, M.D.

Pharmacological Society of Hahnemann College of Philadelphia. The annual meeting is held in Philadelphia, on the fourth Tuesday in October of each year. Monthly meetings are held in the same place, on the fourth Tuesday in each month. President, Charles Mohr, M.D., 1823 Green Street, Philadelphia, Pa.; Secretary, Charles A. Ayres, M.D., 1643 South Broad Street, Philadelphia, Pa. Organized 1895. Not incorporated. Number of members, 20; admitted last year, 1. Annual dues, $2.00. "Several original provings have been made during the year." Delegate, Charles Mohr, M.D.

Reading Homœopathic Hospital and Dispensary Association. No report.

Tennessee.

Chattanooga Homœopathic Medical Society. No report.

Virginia.

Richmond Homœopathic Medical Society. The annual meeting is held in Richmond, on the first Tuesday in February of each year. Monthly meetings are held in the same place, on the Monday before the first Tuesday in each month. President, E. C. Williams, M.D., 115 North Fifth Street, Richmond, Va.; Secretary, Harry S. Corey, M.D., 312 West Grace Street, Richmond, Va. Organized 1895. Not incorporated. Number of members, 7; admitted last year, 1.

Wisconsin.

Milwaukee Academy of Medicine. The annual meeting is held in Milwaukee, in December of each year. Monthly meetings are held at the offices of Chairmen of Bureaus. President, Joseph Lewis, Jr., M.D., 330 National Avenue, Milwaukee, Wis.; Secretary, W. W. Irving, M.D., 173 Wisconsin Street, Milwaukee, Wis. Reorganized 1897. Not incorporated. Number of members, 12. Annual dues, $1.00.

Medical Clubs.

California.

Organon and Materia Medica Club of the Bay Cities of California. The annual meeting is held in San Francisco, on the third Friday in July of each year. Monthly meetings are held alternately in San Francisco and Oakland, on the third Friday of each month. President, J. M. Selfridge, M.D., 1068 Broadway, Oakland, Cal.; Secretary, Guy E. Manning, M.D., 383 Geary Street, San Francisco, Cal. Organized 1894. Not incorporated. Number of members, 9; admitted last year, 2. Several reports have been published by individual members of the society.

Colorado.

Denver Homœopathic Club. The annual meeting is held in Denver, on the third Monday in January of each year. Monthly meetings are held in the same place, on the third Monday in each month. President, Samuel S. Kehr, M.D., 600 California Building, Denver, Col.; Secretary, Edwin J. Clark, M.D., Denver, Col. Organized 1890. Not incorporated. Number of members, 36; admitted last year, 11; died last year, 1. Annual dues, $1.00. Delegate, David A. Strickler, M.D.

Connecticut.

Dunham Medical Club of Hartford. The annual meeting is held in Hartford, on the fourth Saturday of January of each year. Monthly meetings are held in the same place, on the fourth Saturday evening of each month. The President is chosen at each meeting. Secretary, Hills Cole, M.D., Cheney Building, 926 Main Street, Hartford, Conn. Organized 1897. Not incorporated. Number of members, 14.

District of Columbia.

Washington Medical and Surgical Club. The annual meeting is held in Washington, on the third Thursday in December of each year. Monthly meetings are held in the same place, on the third Thursday in each month. President, Ralph Jenkins, M.D., 1732 Massachusetts Avenue, Washington, D. C.; Secretary, Charles A. Davis, M.D., 916 Fifteenth Street, N. W., Washington, D. C. Organized in 1892. Not incorporated. Number of members, 12, and limited to that number. Delegate, William R. King, M.D.

Georgia.

Atlanta Medical Club. No report.

Maryland.

Medical Investigation Club of Baltimore. Number of members, 6. "The club is quiescent in every way, and can hardly be said to exist."

Baltimore Homœopathic Medical and Journal Club. Meetings are held monthly in Baltimore. The President is chosen at each meeting. Secretary, William M. Panebaker, M.D., 1103 Linden Avenue, Baltimore, Md. Organized 1895. Not incorporated. Number of members, 8. Annual dues, $3.00.

Massachusetts.

Hughes Medical Club. No report.

Lowell Hahnemann Club. The annual meeting is held in Lowell, on the third Tuesday in November of each year. Monthly meetings are held on the third Tuesday of each month, with the exception of July and August, in the same place. President, E. H. Packer, M.D., corner of Stattuck and Middle Streets, Lowell, Mass.; Secretary, Nellis W. Stephenson, M.D., 49 Kirk Street, Lowell, Mass. Organized 1881. Not incorporated. Number of members, 10. Annual dues, $2.00.

Farrington Club. The annual meeting is held in Salem, on the first Thursday in September of each year. Weekly meetings are held in the same place, every Thursday evening. President, C. E. Ames, M.D., Ipswich, Mass.; Secretary, C. W. Morse, M.D., Salem, Mass. Organized in 1897. Not incorporated. Number of members, 13. Annual dues, $10.00. "The object of the club is to become proficient in Materia Medica, taking Farrington as a guide; a certain drug is taken up, previously studied, and quizzed at the meeting. The members expect to report some provings before long, of some value."

Missouri.

Hahnemann Club of St. Louis. The annual meeting is held in St. Louis, in January of each year. Meetings are held in the same place, semi-monthly. President is chosen at each meeting. Secretary, James A. Campbell, M.D., 1729 Washington Avenue, St. Louis, Mo. Organized in 1873. Not incorporated. Number of members, 10; died last year, 1. Delegate, James A. Campbell, M.D.

Nebraska.

Western Hahnemannian Club of Omaha. The annual meeting is held in Omaha, on the third Wednesday in May of each year. Monthly meetings are held alternately in Omaha and Council Bluffs, Iowa, on the third Wednesday in each month. The President is chosen at each meeting. Secretary, P. C. Moriarty, M.D., 320 Bee Building, Omaha, Neb. Organized in 1893. Not incorporated. Number of members, 15; admitted last year, 2.

New Jersey.

Atlantic City Homœopathic Medical Club. The annual meeting is held in Atlantic City, on the third Friday in January of each year. Monthly meetings are held in the same place, on the third Friday of each month, with the exception of July and August. President, John R. Fleming, M.D., 1905 Pacific Avenue, Atlantic City, N. J.; Secretary, W. A. Carson, M.D., 716 Atlantic Avenue, Atlantic City, N. J. Organized 1897. Not

incorporated. Number of members, 12. Annual dues, $2.00. Delegate, John R. Fleming, M.D.

Communipaw Medical Club. Meetings are held semi-monthly, in Jersey City. President, Levings A. Opdyke, M.D., 55 Clinton Avenue, Jersey City, N. J.; Secretary, James Hoffman, M.D., 461 Jersey Avenue, Jersey City, N. J. Organized 1885. Not incorporated. Number of members, 3.

Machaon Club of Jersey City. Annual meeting is held in Jersey City, in February of each year. Monthly meetings are held in different places. President, J. M. Holloway, M.D., 105 Hoboken Avenue, Jersey City, N. J.; Secretary, Z. P. Fletcher, M.D., 23 Cottage Street, Jersey City, N. J. Organized 1893. Not incorporated. Number of members, 12. Annual dues, $1.00.

New Jersey Chiron Club. The annual meeting is held in Newark, in June of each year. Monthly meetings are held in the same place. President is chosen at each meeting. Secretary, E. D. G. Conkling, M.D., 224 Belleville Avenue, Newark, N. J. Organized 1894. Not incorporated. Number of members, 13. Annual dues, $13.50.

New Jersey Medical Club. No report.

New York.

Clinical Club of Buffalo. The annual meeting is held in Buffalo, on the second Monday in April of each year. Monthly meetings are held in the same place, on the second Monday in each month from October to May. President is chosen at each meeting. Secretary, William D. Young, M.D., 29 Park Street, Buffalo, N. Y. Organized 1895. Not incorporated. Number of members, 28.

Chiron Club of New York. The annual meeting is held in New York City, in December of each year. Meetings are held monthly in the same place. President, George Dowling, M.D., 5 Albemarle Road, Brooklyn, N. Y.; Secretary, John W. Dowling, M.D., 8 West Forty-fifth Street, New York City. Organized 1886. Not incorporated. Number of members, 20.

Jahr Club of New York. President, William H. Bishop, M.D., 46 West Forty-eighth Street, New York City; Secretary, Francis E. Doughty, M.D., 512 Madison Avenue, New York City. Organized 1876. Not incorporated. Number of members, 12.

Meissen Club of New York. No report.

New York Homœopathic Union. The annual meeting is held in New York City, on the third Thursday in April of each year. Monthly meetings are held in the same place, on the third Thursday in each month. President, Edward Carleton, M.D., 62 West Forty-ninth Street, New York City; Secretary, Emma D. Wilcox, M.D., 20 West One Hundred and Fourth Street, New York City. Organized 1888. Not incorporated. Number of members, 50. "The object of the society is to promulgate the teachings of Hahnemann."

New York Homœopathic Materia Medica Society. The annual meeting is held in New York City, on the third Wednesday in December of each year. Monthly meetings are held in the same place, on the third Wednesday of each month. President, Martin Deschere, M.D.; Secretary, Charles Ver Nooy, M.D., 148 West Sixty-fourth Street, New York City. Organized

1891. Not incorporated. Number of members, 112; admitted last year, 7. Annual dues, $2.00. Delegate, Martin Deschere, M.D.

Unanimous Club of New York. The annual meeting is held in New York City, on the last Monday in December of each year. Quarterly meetings are held in the same place, on the last Monday evenings of March, June, and September. The President is chosen at each meeting. Secretary, John B. Garrison, M.D., 111 East Seventieth Street, New York City. Organized 1893. Not incorporated. Number of members, 22; admitted last year, 6. Annual dues, $20.00.

Farrington Medical Club of Watertown. The annual meeting is held in Watertown, on the second Wednesday in November of each year. Monthly meetings are held in the same place, on the second Wednesday in each month excepting July, August, and September. President, G. S. Farmer, M.D., Watertown, N. Y.; Secretary, William T. Laird, M.D., Watertown, N. Y. Organized 1887. Not incorporated. Number of members, 5. Annual dues, $1.00.

Pennsylvania.

Organon Club of Chester. No report.

Bœnninghausen Club of Philadelphia. The annual meeting is held in Philadelphia, on the fourth Wednesday in November of each year. Monthly meetings are held in the same place, on the fourth Wednesday of each month. President, Charles M. Brooks, M.D., 1613 North Tenth Street, Philadelphia, Pa.; Secretary, George W. Smith, M.D., 805 North Broad Street, Philadelphia, Pa. Organized 1877. Not incorporated. Number of members, 9; admitted last year, 1. Annual dues, $2.00.

Hahnemann Club of Philadelphia. The annual meeting is held in Philadelphia, on the second Tuesday in April of each year. Monthly meetings are held in the same place, on the second Tuesday in each month. President, Caleb S. Middleton, M.D., 1523 Girard Avenue, Philadelphia, Pa.; Secretary, Thomas S. Denning, M.D., 1328 North Fifteenth Street, Philadelphia, Pa. Organized 1872. Not incorporated. Number of members, 12. Has published the papers and discussions of each meeting in the journals.

Oxford Medical Club of Philadelphia. The annual meeting is held in Philadelphia, on the first Friday in January of each year. Monthly meetings are held in the same place, on the first Friday evening of each month. Organized 1885. Not incorporated. President, Herbert B. Coy, M.D., 2724 Girard Avenue, Philadelphia, Pa.; Secretary, Irwin B. Gilbert, M.D., 2027 Columbia Avenue, Philadelphia, Pa. Number of members, 13. Annual dues, $5.00. "Good practical papers are read at each meeting, and thoroughly discussed." Delegate, Edward R. Snader, M.D.

Philadelphia Clinical Society. The annual meeting is held in Philadelphia, in October of each year. Semi-monthly meetings are held in the same place. President, Charles M. Thomas, M.D., 1623 Arch Street, Philadelphia, Pa.; Secretary, William H. Bigler, M.D., 118 North Seventeenth Street, Philadelphia, Pa. Organized 1880. Not incorporated. Number of members, 10.

Philadelphia Medical Club. The annual meeting is held in Philadelphia, on the first Wednesday in January of each year. Monthly meetings

are held in the same place, on the first Wednesday in each month. President, Clarence Bartlett, M.D., 1506 Arch Street, Philadelphia, Pa.; Secretary, Edwin H. Van Deusen, M.D., 2101 Tioga Street, Philadelphia, Pa. Organized 1880. Not incorporated. Number of members, 14. Has published various papers in the journals.

A. R. Thomas Club. The annual meeting is held in Philadelphia, on the second Wednesday in March of each year. Monthly meetings are held in the same place, on the second Wednesday in each month. President, Charles D. Smedley, M.D., Wayne, Pa.; Secretary, Albert A. Norris, M.D., 4818 Chester Avenue, Philadelphia, Pa. Organized 1888. Not incorporated. Number of members, 23; admitted last year, 4.

Saturday Night Club of Microscopists of Philadelphia. The annual meeting is held in Philadelphia, on the second Saturday in January of each year. Monthly meetings are held in the same place, on the second Saturday of each month. President, Joseph C. Guernsey, M.D., 1923 Chestnut Street, Philadelphia, Pa.; Secretary, Nathan Smilie, M.D., 4624 Chester Avenue, Philadelphia, Pa. Organized 1894. Not incorporated. Number of members, 49; admitted last year, 11. Annual dues, $1.00. Has published monthly in the *Hahnemannian Monthly* several papers read before the club by members. "The society has done much better work during the last year than it had previously done for several years." Delegate, Joseph C. Guernsey, M.D.

Trousseau Clinical Club of Philadelphia. The annual meeting is held in Philadelphia, on the first Tuesday in May of each year. Monthly meetings are held in the same place, on the first Tuesday in each month. President, W. D. Carter, M.D., 1533 South Fifteenth Street, Philadelphia, Pa.; Secretary, W. A. Weaver, M.D., 1537 Master Street, Philadelphia, Pa. Organized 1895. Not incorporated. Number of members, 25; admitted last year, 4. Annual dues, $2.00. Has published a number of original papers in the journals.

Woman's Homœopathic Medical Club. The annual meeting is held on the first Monday evening of November of each year, in Philadelphia. Monthly meetings are held in the same place, on the first Monday in each month. President, E. A. McClure, M.D., 1919 Wallace Street, Philadelphia, Pa.; Secretary, L. W. Stokes, M.D., 1719 Arch Street, Philadelphia, Pa. Organized 1883. Not incorporated. Number of members, 20; admitted last year, 3. "Papers read, reports of cases, discussions, make our meetings very interesting and profitable."

Duquesne Medical Club of Pittsburg. No report.

Miscellaneous Homœopathic Associations.

The Meissen. The annual meeting is held at the same time and at the same place as the American Institute of Homœopathy. President, Mrs. Chester G. Higbee, 115 East Ninth Street, St. Paul, Minn.; Secretary, Miss Emily F. Paine, 55 West Forty-eighth Street, New York City. Organized 1893. Not incorporated. Number of members, 211; admitted last year, 25; died last year, 1. Annual dues, $1.00.

The New England Hahnemann Association. The annual meeting is held in Boston, on the second Monday in January of each year. Another

meeting is held in Boston, on the anniversary of Hahnemann's birthday of each year, April 11. President, Col. Henry S. Russell, Malden, Mass.; Secretary, I. Tisdale Talbot, M.D., 687 Boylston Street, Boston, Mass. Organized 1894. Incorporated 1896. Number of members, 360; admitted last year, 30; died last year, 18. Annual dues, $2.00. Publishes the *Bulletin of Medical Instruction*. Delegate, J. Heber Smith, M.D.

Homœopathic Pharmaceutical Association of Pennsylvania. The annual meeting is held in Philadelphia. President, J. F. Slough, M.D., Allentown, Pa.; Secretary, E. P. Anshutz, P. O. Box 921, Philadelphia, Pa. Organized 1881. Incorporated 1881. Number of members, 33.

General Homœopathic Hospitals.

Alaska.

Sitka Mission Hospital, Sitka. No report.

California.

Fabiola Hospital Association, Oakland. Incorporated 1877. Opened for patients 1877. Executive Officer, Mrs. John Yule, Chicago Avenue, East Oakland. Number of beds, 75. Number of patients treated last year, 570; cured, 431; relieved, 54; not relieved, 10; died, 29. Supported by contributions and pay from private patients.

Good Samaritan Hospital, San Diego. Incorporated 1887. Opened for patients 1889. Executive Officer, Thomas Docking, M.D., 164 Boston Avenue, San Diego. The hospital is closed for the time being.

Homœopathic Sanitarium, San Francisco. Not incorporated. Opened for patients 1896. Executive Officer, William S. Boericke, M.D., 1812 Washington Street, San Francisco. Number of beds, 27. Number of patients treated last year, 275; cured, 191; relieved, 49; not relieved, 10; died, 13. Supported by pay of patients. "The little Sanitarium has given just cause for pride and gratification in its growth and good work. We have outgrown our present quarters, and shall soon be established in much larger and more modern ones."

Colorado.

Denver Homœopathic Hospital. Incorporated 1894. Opened for patients 1895. Executive Officer, B. A. Wheeler, 1441 Stout Street, Denver. Supported by pay of patients, charitable contributions, and the Denver Homœopathic Medical College and Hospital Association. Number of beds, 16. Number of patients treated last year, 119; cured, 100, relieved, 7; not relieved, 2; died, 10. Value of hospital property, $12,500.

Connecticut.

Grace Homœopathic Hospital, New Haven. Incorporated 1889. Opened for patients 1892. Executive Officer, Emory J. Walker, M.D., New Haven. Supported by pay of patients, State appropriations, and volun-

tary contributions. Value of hospital property, $100,000. Number of beds, 75. Number of patients treated last year, 274; cured, 221; relieved, 13; not relieved, 14; died, 14.

Crest View Sanitarium, Greenwich. Not incorporated. Opened for patients 1894. Executive Officer, Henry M. Hitchcock, M.D., Greenwich. Supported by pay of patients. Value of hospital property, $40,000. Number of beds, 24. Number of patients treated last year, 24; cured, 5; relieved, 16; not relieved, 2; died, 1.

Elmcroft, Enfield. No report.

Grey Towers, Stamford. No report.

Dr. Givens' Sanitarium, Stamford Hall, Stamford. Not incorporated. Opened for patients 1891. Number of beds, 100. Number of patients treated last year, 136. Value of hospital property, $75,000.

Delaware.

Homœopathic Hospital of Delaware, Wilmington. Incorporated 1888. Opened for patients 1888. Executive Officer, Mrs. Emma Quigley, Eighth Street and Jefferson Avenue, Wilmington. Supported by annual subscriptions and board of patients. Value of hospital property, $25,000. Number of beds, 35. Number of patients treated last year, 103; cured, 96; relieved, 4; not relieved, 1; died, 2. Delegate, Lewis W. Flinn, M.D.

District of Columbia.

National Homœopathic Hospital Association, Washington. Incorporated 1881. Opened for patients 1884. Executive Officer, S. S. Shedd, 432 Ninth Street, N. W., Washington, D. C. Supported by Congressional appropriations, Ladies' District Association, pay of patients, donations. Value of hospital property, $65,000. Number of beds, 50. Number of patients treated last year, 502; cured, 324; relieved, 107; not relieved, 17; died, 24.

Florida.

St. Luke's Hospital, Homœopathic Department, Jacksonville. Incorporated 1882. Opened for patients 1882. Executive Officer, Mrs. William M. Bostwick, Jacksonville, Fla. Supported by contributions and pay of patients. Value of hospital property, $8,000. Number of patients treated last year, 4; cured, 4. Delegate, Henry R. Stout, M.D.

Illinois.

Cook County Hospital, Homœopathic Department, Chicago. No report.

Hahnemann Hospital, Chicago. Incorporated 1855. Opened for patients 1870. Executive Officer, George F. Shears, M.D., 3130 Indiana Avenue, Chicago, Ill. Supported by endowments and voluntary contributions. Value of hospital property, $150,000. Number of beds, 170. Number of patients treated last year, 835; cured, 625; relieved, 112; not re-

lieved, 51; died, 47. "Hospital is prosperous; we have added to the grounds by purchase."

Chicago Homœopathic Hospital, Chicago. Incorporated 1876. Opened for patients 1876. Executive Officer, Judson E. Hetherington, M.D., 1035 Warren Avenue, Chicago, Ill. Supported by pay of patients, training school, and voluntary contributions. Value of hospital property, $30,000. Number of beds, 30. Number of patients treated last year, 316; cured, 272; relieved, 8; not relieved, 18; died, 18. Delegate, Judson E. Hetherington, M.D.

Streeter's Hospital, Chicago. Incorporated 1888. Opened for patients 1888. Executive Officer, Edward Clark Streeter, M.D., 2646 Calumet Avenue, Chicago, Ill. Supported by pay of patients. Value of hospital property, $60,000. Number of beds, 28. Number of patients treated last year, 274; cured, 21; relieved, 49; not relieved, 10; died, 4. Delegate, John W. Streeter, M.D.

Mark M. Thompson Sanitarium, Chicago. Not incorporated. Opened for patients 1892. Executive Officer, Mark M. Thompson, M.D., 805 West Monroe Street, Chicago, Ill. Supported by fees of patients. Value of hospital property, $40,000. Number of beds, 10. Number of patients treated last year, 60; cured, 50; relieved, 5; not relieved, 3; died, 2. Delegate, Mark M. Thompson, M.D.

Indiana.

The O. S. Runnels Private Hospital, Indianapolis. Opened for patients 1891. Supported by fees of patients. Value of hospital property, $30,000. Executive Officer, O. S. Runnels, M.D., 522 North Illinois Street, Indianapolis, Ind. Number of beds, 30. Number of patients treated last year, 124; cured, 87; relieved, 26; not relieved, 8; died, 3. Delegate, O. S. Runnels, M.D.

Iowa.

Homœopathic Hospital of the State University of Iowa, Iowa City. Incorporated 1888. Opened for patients 1888. Executive Officer, James Gilchrest, M.D., 215 College Street, Iowa City, Iowa. Supported by State appropriations. Value of hospital property, $35,000. Number of beds, 52. Number of patients treated last year, 555; cured, 385; relieved, 122; not relieved, 16; died, 3. Delegate, James G. Gilchrest, M.D.

St. Bernard's Hospital, Homœopathic Department, Council Bluffs. Incorporated 1888. Opened for patients 1888. It is under the supervision of Sisters of Mercy. Supported by voluntary contributions. Value of hospital property, $150,000. Number of beds, 250. Number of patients treated last year, 850; cured, 620; relieved, 190; not relieved, 35; died, 25. Delegate, P. J. Montgomery, M.D. "There are two medical and surgical staffs. The Allopaths have about two-thirds of the cases, and the Homœopaths have one-third of the cases."

Woman's Christian Association Hospital, Homœopathic Department, Council Bluffs. Incorporated 1894. Opened for patients 1893. Executive Officer, Mrs. Laura J. MacBride, 403 Glen Avenue, Council Bluffs, Iowa. Supported by pay of patients and voluntary contributions. Value of hospital property, $30,000. Number of beds, 30. Number of patients treated

last year, 65; cured, 60; not relieved, 2; died, 3. Delegate, A. P. Hanchett, M.D. "The Woman's Christian Association Hospital is opened for patients of either school of practice. By a generous gift to the association by Mrs. Sarah J. Ballard, we are building an enlargement to our hospital. Our rooms are filled at all times with patients."

Maryland.

Baltimore Homœopathic Sanitarium, Baltimore. Not incorporated. Opened for patients 1893. Executive Officer, Flora A. Brewster, M.D., 1221 Madison Avenue, Baltimore, M.D. Supported by fees of patients. Value of hospital property, $25,000. Number of beds, 6. Number of patients treated last year, 24; cured, 19; relieved, 3; not relieved, 1; died, 1.

Maryland Homœopathic Hospital, Baltimore. Incorporated 1890. Opened for patients 1890. Executive Officer, John T. Graham, 223 St. Paul Street, Baltimore, Md. Supported by State and city appropriations, and private subscriptions. Value of hospital property, $30,000. Number of beds, 37. Number of patients treated last year, 712; cured, 501; relieved, 180; not relieved, 18; died, 13. "We are now building an addition to our hospital which will accommodate forty more beds."

Dr. Irving Miller's Sanitarium, Baltimore, Md. Executive Officer, Irving Miller, M.D., 1927 St. Paul Street, Baltimore, Md.

Carroll Springs Sanitarium, Forrest Glen. Not incorporated. Opened for patients 1899. Executive Officer, G. H. Wright, M.D., Forrest Glen, Md. Supported by pay of patients. Value of hospital property, $20,000. Number of beds, 20. Number of patients treated last year, 60; cured, 43; relieved, 7; not relieved, 10. Delegate, G. H. Wright, M.D.

Massachusetts.

Massachusetts Homœopathic Hospital, Boston. Incorporated 1885. Opened for patients 1871. Executive Officer, I. Tisdale Talbot, M.D., 685 Boylston Street, Boston, Mass. Supported by funds and paying patients. Value of hospital property, $300,000. Number of beds, 50. Number of cases treated last year, 1,566; cured, 1,004; relieved, 392; not relieved, 43; died, 54. Delegate, I. Tisdale Talbot, M.D.

Rufus S. Frost General Hospital, Chelsea. No report.

Lowell General Hospital, Homœopathic Department, Lowell. Incorporated 1891. Opened for patients 1893. Executive Officer, G. Forrest Martin, M.D., 17 Kirk Street, Lowell, Mass. Supported by endowed beds, voluntary contributions, and board of private cases. Value of hospital property, $50,000. Number of beds, 40. Number of patients treated last year, 213; cured, 141; relieved, 39; not relieved, 14; died, 19. Delegate, H. M. Hunter, M.D. "The Homœopaths have six men on the medical staff, as heretofore, and, in addition, now have one of the surgeons, Dr. G. Forrest Martin having been appointed to the regular surgical staff. The house physician, Dr. Parker, is also a Homœopath this year. This is the first time we have secured this office."

Malden Hospital, Homœopathic Department, Malden. Incorporated 1890. Opened for patients 1892. Executive Officer, E. F. Sweet, 42 Apple-

ton Street, Malden, Mass. Supported by investments and donations. Value of hospital property, $70,000. Number of beds, 38. Number of patients treated last year, 248; cured, 161; relieved, 26; not relieved, 7; died, 19. Delegate, Maria C. Nordstrom, M.D.

City Hospital of Quincy, Homœopathic Department, Quincy. Incorporated 1889. Opened for patients 1890. Executive Officer, Timothy Reed, Quincy, Mass. Supported by city appropriations, voluntary contributions, and pay of patients. Value of hospital property, $35,000. Number of beds, 26. Number of patients treated last year, 214; cured, 137; relieevd, 44; not relieved, 18; died, 15. Delegate, H. C. Hallowell, M.D. "This hospital is strictly a city hospital. Its physicians are of both schools of medicine, the old school very largely predominating."

Somerville Hospital, Homœopathic Department, Somerville. Incorporated 1891. Opened for patients 1893. Supported by endowment fund, pay of patients, city appropriations, and voluntary contributions. Value of hospital property, $50,000. Executive Officer, Miss Fannie C. Hartwell, Somerville, Mass. Number of beds, 40. Number of patients treated last year, 50; cured, 30; relieved, 14; not relieved, 1; died, 5. Delegate, F. L. Newton, M.D. "This hospital is under control of trustees with usual organization and committees; it is superintended by a matron, appointed and directed by an Executive Committee. A medical board of four physicians chosen by Executive Committee, two of each school, provide for service by choice of a staff confirmed by the Executive Committee. The patients elect by which school of practice they will be treated, and in case of their having no choice, they are assigned by turn to either. The rules and regulations provide for equal rights."

Worcester Hahnemann Hospital, Worcester. Incorporated 1896. Opened for patients 1896. Executive Officer, J. K. Warren, M.D., 68 Pleasant Street, Worcester, Mass. Supported by private patients, and voluntary contributions. Value of hospital property, $25,000. Number of beds, 15. Number of patients treated last year, 50; cured, 46; died, 4. Delegate, F. R. Warren, M.D.

Worcester Homœopathic Hospital and Dispensary, Worcester. Executive Officer, E. A. Fisher, M.D., Elm Street, Worcester, Mass. The hospital is not yet opened for patients.

Michigan.

Homœopathic Hospital of the University of Michigan, Ann Arbor. Incorporated 1874. Opened for patients 1875. Executive Officer, Roy S. Copeland, M.D., 46 Catharine Street, Ann Arbor, Mich. Supported by State appropriations. Value of hospital property, $45,000. Number of beds, 70. Number of patients treated last year, 905; cured, 870; relieved, 33; died, 2. Delegate, Roy S. Copeland, M.D.

The Grace Hospital, Detroit. Incorporated 1886. Opened for patients 1888. Executive Officer, A. T. Putnam, Grace Hospital, Detroit. Supported by endowment fund, pay of patients, and voluntary contributions. Value of hospital property, $200,000. Number of beds, 120. Number of patients treated last year, 975; cured, 680; relieved, 207; not relieved, 27; died, 1.

Reed City Sanitarium, Reed City. Opened for patients 1895. Executive Officer, Ernest W. Spinney, M.D., Reed City. Supported by pay of patients. Value of hospital property, $25,000. Number of beds, 100. Number of patients treated last year, 163; cured, 90; relieved, 43; not relieved, 27; died, 3. Delegate, Ernest B. Spinney, M.D.

Missouri.

Good Samaritan Homœopathic Hospital and Asylum of St. Louis. Incorporated 1858. Opened for patients 1858. Executive Officer, Henry Wiebusch, 631 South Fourth Avenue, St. Louis, Mo. Supported by paying patients, donations, and legacies. Value of hospital property, $50,000. Number of beds, 75. Number of patients treated last year, 210; cured, 102; relieved, 32; not relieved, 8; died, 27. "We expect to build very soon. The removing, for a long time, of quite a number of patients afflicted with chronic diseases, feebleness, etc., makes the number of patients treated last year less than it would otherwise be."

Montana.

Dr. Blackburn's Hospital, Butte. Opened for patients 1892. Executive Officer, G. E. Blackburn, M.D., corner of Main and Copper Streets, Butte, Mont. Supported by pay of patients. Number of beds, 30. Number of patients treated last year, 87; cured, 87. Delegate, G. E. Blackburn, M.D. "We have had under our care during the last five years upwards of five hundred cases, and during that time we have had but three deaths."

Haviland Hospital, Whitehall. No report.

New Jersey.

Galen Hall, Atlantic City. No report.

West New Jersey Homœopathic Hospital, Camden. Incorporated 1891. Opened for patients 1891. Executive Officer, Wilfred M. Kaighn, 250 Mount Vernon Street, Camden, N. J. Supported by city appropriations, and voluntary contributions. Value of hospital property, $8,000. Number of beds, 22. Number of patients treated last year, 84; cured, 70; relieved, 12; died, 2. Delegate, Wallace McGeorge, M.D.

Brookside Retreat, Plainfield. Incorporated 1891. Opened for patients 1899. Executive Officer, Justus H. Cooley, M.D., Plainfield, N. J. Supported by pay of patients. Value of hospital property, $50,000. Number of beds, 25. Number of cases treated last year, 39; cured, 18, 72%; relieved, 12; not relieved, 8; died, 1.

Plainfield Sanitarium, Plainfield. Opened for patients 1879. Executive Officer, Justus H. Cooley, M.D., Plainfield, N. J. Supported by pay of patients. Value of hospital property, $22,000. Number of beds, 24. Number of patients treated last year, 58; cured, 33, 81%; relieved, 22; not relieved, 1; died, 2.

Trenton Homœopathic Hospital, Trenton. Incorporated 1887. Opened for patients 1888. Executive Officer, E. B. Witte, M.D., 125 East State Street, Trenton, N. J. Supported by pay of patients, private contribu-

tions, and training school. Number of beds, 25. "We hoped to have dedicated our new building before this, but, owing to unavoidable delay, we shall not be able to do so before next Spring. The new building is a handsome brick structure, and will accommodate about one hundred patients. The work this year has not been up to the standard owing to our expected removal, but we have had nearly the same number of patients as last year, with about same results."

Newark Orphan Asylum, Newark. No report.

New York.

Albany City Homœopathic Hospital, Albany. Incorporated 1868. Opened for patients 1868. Executive Officer, J. W. Cox, 109 State Street, Albany. Supported by pay of patients, city appropriations, and voluntary contributions. Value of hospital property, $30,000. Number of beds, 34. Number of patients treated last year, 268; cured, 166; relieved, 140; not relieved, 9; died, 13. Delegate, Edward G. Cox, M.D.

Brooklyn Homœopathic Hospital, Brooklyn. Incorporated 1852. Opened for patients 1853. Executive Officer, Frank T. Arnold, 117 Montague Street, Brooklyn. Supported by city appropriations, and personal subscriptions. Value of hospital property, $165,000. Number of beds, 130. Number of patients treated last year, 1,128; cured, 744; relieved, 246; not relieved, 47; died, 91.

Muncie Sanitarium, Brooklyn. Incorporated 1894. Opened for patients 1894. Executive Officer, E. H. Muncie, M.D., corner Macon Street and Marcy Avenue, Brooklyn, N. Y. Supported by pay of patients. Value of hospital property, $65,000. Number of beds, 18. Number of patients treated last year, 275; cured, 257; relieved, 18; died, 1. Delegate, L. H. Muncie, M.D.

Buffalo Homœopathic Hospital, Buffalo. Incorporated 1872. Opened for patients 1872. Executive Officer, George V. Forman, Fidelity Loan and Trust Company, Buffalo, N. Y. Supported by private patients, city and county appropriations, an endowed bed, and donations. Value of hospital property, $16,000. Number of beds, 46. Number of patients treated last year, 527; cured, 376; relieved, 58; not relieved, 15; died, 29. "This hospital, although a Homœopathic Hospital, yet it is open to the practice of physicians of all schools, and many men avail themselves of this privilege, especially for operations. This is on account of the excellence of our nurses, and the care which the patients receive."

Lexington Heights Hospital, Buffalo. Incorporated 1890. Opened for patients 1890. Executive Officer, De Witt G. Wilcox, M.D., 173 Lexington Avenue, Buffalo, N. Y. Supported by pay of patients. Value of hospital property, $16,000. Number of beds, 14. Number of patients treated last year, 304; cured, 200; relieved, 80; not relieved, 17; died, 7. Delegate, De Witt G. Wilcox, M.D.

Homœopathic Hospital, New Rochelle. No report.

Homœopathic Hospital and Dispensary, Mount Vernon. Executive Officer, J. A. House, M.D., 136 Park Avenue, Mount Vernon, N. Y. The hospital has not yet been opened for patients, but it is hoped that it will be opened soon.

Flower Hospital, New York. Incorporated 1889. Opened for patients 1889. Executive Officer, J. Perry Seward, M.D., 113 West Eighty-fifth Street, New York City. Supported by voluntary contributions, and city appropriations. Value of hospital property, $275,000. Number of beds, 88. Number of patients treated last year, 2,948; cured, 872; relieved, 1,785; not relieved, 134; died, 91.

Hahnemann Hospital, New York. Incorporated 1869. Opened for patients 1869. Supported by pay of patients, and voluntary contributions. Value of hospital property, $160,000. Executive Officer, Samuel J. Drake, 57 Broadway, New York City. Number of beds, 100. Number of patients treated last year, 750; cured, 672; relieved, 42; not relieved, 15; died, 21. Delegate, T. Franklin Smith, M.D.

Harlem Homœopathic Hospital. The hospital has not yet been opened for patients.

Laura Franklin Hospital for Children, New York. Incorporated 1886. Opened for patients 1886. Executive Officer, John W. Dowling, M.D., 8 West Forty-fifth Street, New York City. Supported by pay of patients, and endowment fund. Value of hospital property, $100,000. Number of beds, 60. Number of patients treated last year, 152; cured, 76; relieved, 68; not relieved, 4; died, 4.

Metropolitan Hospital, Blackwell's Island, New York. Opened for patients 1875. Executive Officer, George Taylor Stewart, M.D., Blackwell's Island, New York City. Supported by city appropriations. The hospital is owned by the city. Number of beds, 578. Number of patients treated last year, 5,859; cured, 1,096; relieved, 3,493; not relieved, 346; died, 415. A very large majority of the deaths were from phthisis.

Hargous Memorial Hahnemann Hospital, Rochester. Incorporated 1889. Opened for patients 1889. Supported by pay of patients, and donations. Value of hospital property, $25,000. Executive Officer, Mrs. R. C. Grant, 279 South Avenue, Rochester, N. Y. Number of beds, 35. Number of patients treated last year, 156; cured, 53; relieved, 54; not relieved, 33; died, 16. Delegate, G. W. Thompson, M.D. "In 1895 the city of Rochester allowed us $1,000 a year for the support of an ambulance, which has, and is now, a very great feature and help in every sense to our hospital."

Rochester Homœopathic Hospital, Rochester. Incorporated 1887. Opened for patients 1889. Executive Officer, William A. Hubbard, 16 Phelps Avenue, Rochester, N. Y. Supported by board of patients, endowed beds, and private subscriptions. Value of hospital property, $400,000. Number of beds, 100. Number of patients treated last year, 1,431; cured, 1,080; relieved, 339; not relieved, 34; died, 75.

Syracuse Homœopathic Hospital, Syracuse. Incorporated 1895. Opened for patients 1897. Executive Officer, E. Elmer Keeler, M.D., 423 East Jefferson Street, Syracuse, N. Y. Supported by endowments, donations, city aid, and board of private patients. Number of beds, 15. Number of patients treated last year, 183; cured, 162; relieved, 10; not relieved, 1; died, 11. "We are proud of our first year's record, considering that no case has been refused, and four of the fatal cases were moribund when admitted to the hospital."

Utica Homœopathic Hospital, Utica. Incorporated 1895. Opened for

patients 1895. Executive Officer, George S. Dana, 160 Park Avenue, Utica, N. Y. Supported by board of patients, and private subscriptions and donations. Value of hospital property, $25,000. Number of beds, 10. Number of patients treated last year, 125; cured, 97; relieved, 11; not relieved, 2; died, 6.

Homœopathic Home and Maternity, Yonkers. Incorporated 1896. Opened for patients 1896. Executive Officer, Mrs. Walter W. Law, 127 Ashburton Avenue, Yonkers, N. Y. Supported by donations, private patients, and city appropriations. Value of hospital property, $8,500. Number of beds, 10. Number of patients treated last year, 110; cured, 78; relieved, 13; not relieved, 3; died, 5. Delegate, R. Oliver Phillips, M.D.

Ohio.

Cleveland Homœopathic Hospital, Cleveland. Incorporated 1867. Opened for patients 1867. Executive Officer, Harlan Pomeroy, M.D., 526 Prospect Street, Cleveland, Ohio. Supported by receipts from patients, and voluntary contributions. Value of hospital property, $100,000. Number of beds, 100. Number of patients treated last year, 1,069; cured, 871; relieved, 80; not relieved, 3; died, 64. Delegate, Harlan Pomeroy, M.D.

Sixth Avenue Private Hospital, Columbus. Opened for patients 1896. Executive Officer, W. B. Carpenter, M.D., 659 North High Street, Columbus, Ohio. Supported by pay of patients. Value of hospital property, $20,000. Number of beds, 15. Number of patients treated last year, 50; cured, 46; relieved, 3; died, 1. Delegate, W. B. Carpenter, M.D.

Toledo Hospital, Homœopathic Department, Toledo. No report.

The Dr. C. E. Sawyer Sanitarium, Marion. Incorporated 1895. Opened for patients 1895. Executive Officer, Charles E. Sawyer, M.D., Marion, Ohio. Supported by pay of patients. Value of hospital property, $35,000. Number of beds, 35. Number of patients treated last year, 200; cured, 110; relieved, 90. Delegate, Charles E. Sawyer, M.D.

Oregon.

Portland Hospital, Portland. Incorporated 1887. Opened for patients 1887. Executive Officer, W. Y. Masters, 131 Third Street, Portland, Ore. Supported by board of patients, and private subscriptions. Value of hospital property, $65,000. Number of beds, 60. Number of patients treated last year, 393; cured, 298; relieved, 72; not relieved, 9; died, 14. Delegate, Henry C. Jefferds, M.D.

Pennsylvania.

Elmwood Hall, Elmhurst. Incorporated 1898. Opened for patients October 1, 1898. Executive Officer, W. H. H. Bull, M.D., Elmhurst, Pa. Supported by board, and treatment of guests. Value of hospital property, $110,000. Number of beds, 150.

Easton Sanitarium, Easton. Incorporated 1894. Opened for patients 1894. Executive Officer, James P. Pursell, M.D., Easton, Pa. Supported by pay of patients. Value of hospital property, $20,000. Number of beds, 30. Number of patients treated last year, 50; cured, 41; relieved, 5; died, 1. Delegate, James P. Pursell, M.D.

Children's Homœopathic Hospital of Philadelphia. Incorporated 1877. Opened for patients 1887. Executive Officer, N. F. Lane, M.D., 1435 Poplar Street, Philadelphia, Pa. Supported by voluntary contributions, and State appropriations. Number of beds, 33. Number of patients treated last year, 222; cured, 184; relieved, 15; not relieved, 5; died, 4. Value of hospital property, $70,000. "The institution graduated five nurses from its training school in June. Plans are now being made for a new commodious hospital building, to be erected during the present year."

Hahnemann Medical College Hospital, Philadelphia. Incorporated 1869. Opened for patients 1871. Executive Officer, William G. Foulke, Franklin Building, Philadelphia, Pa. Supported by endowment funds, pay of patients, and voluntary contributions. Value of hospital property, $692,000. Number of beds, 200. Number of patients treated last year, 1,580; cured, 1,173; relieved, 130; not relieved, 79; died, 102. Delegate, Charles Mohr, M.D.

Medical, Surgical, and Maternity Hospital of Woman's Homœopathic Association of Pennsylvania, Philadelphia. Incorporated 1882. Opened for patients 1884. Executive Officer, Mrs. F. B. Skinner, Provident Building, Philadelphia, Pa. Supported by annual subscriptions, donations, small endowment fund, and board of patients. Value of hospital property, $248,300. Number of beds, 73. Number of patients treated last year, 487; cured, 378; relieved, 40; not relieved, 9; died, 25. "Of the deaths, thirteen were infants and small children; three others were brought to the hospital in a moribund condition."

St. Luke's Homœopathic Hospital, Philadelphia. Incorporated 1896. Opened for patients 1896. Executive Officer, J. M. Zook, 1728 North Nineteenth Street, Philadelphia, Pa. Supported by voluntary contributions. Value of hospital property, $11,000. Number of beds, 15. Number of patients treated last year, 269; cured, 219; relieved, 20; not relieved, 6; died, 24. Delegate, William W. Van Baun, M.D.

Woman's Southern Homœopathic Hospital, Philadelphia. Incorporated 1896. Opened for patients 1896. Executive Officer, Eliza Lang McClure, M.D., 1919 Wallace Street, Philadelphia, Pa. Supported by charity donations. Value of hospital property, $13,000. Number of beds, 30. Number of patients treated last year, 100; cured, 89; relieved, 23; not relieved, 2; died, 10. "Our hospital is largely maternity, and five of the deaths were still-born and abortions; five deaths took place in less than twenty-four hours after admission. Our work is among the very poorest and worst classes."

Homœopathic Medical and Surgical Hospital and Dispensary of Pittsburg. Incorporated 1866. Opened for patients 1866. Supported by pay patients, State appropriations, and donations. Value of hospital property, $248,178. Executive Officer, W. D. Slack, Pittsburg, Pa. Number of beds, 160. Number of patients treated last year, 1,879; cured, 1,169; relieved, 429; not relieved, 76; died, 109. Delegate, James H. McClelland, M.D.

Homœopathic Medical and Surgical Hospital of Reading. Incorporated 1899. Opened for patients 1891. Executive Officer, W. W. Light, 35 North Sixth Street, Reading, Pa. Supported by State appropriations, and other sources. Value of hospital property, $30,000. Number of beds, 20.

Number of patients treated last year, 176; cured, 133; relieved, 29; not relieved, 9; died, 5.

Homœopathic Hospital, Scranton. No report.

Walter's Sanitarium, Walter Park. Opened for patients 1876. Supported by pay of patients. Value of hospital property, $150,000. Executive Officer, Robert Walter, M.D., Walter Park, Pa. Number of beds, 150. Number of patients treated last year, 300; cured, 291; relieved, 8; died, 1.

Rhode Island.

Rhode Island Homœopathic Hospital, Providence. Incorporated 1878. Opened for patients 1886. Supported by board of patients and benefactions. Value of hospital property, $60,000. Executive Officer, Albert C. Day, 155 Canal Street, Providence, R. I. Number of beds, 70. Number of patients treated last year, 202; cured, 172; relieved, 25; died, 5. Delegate, George B. Peck, M.D.

Wisconsin.

Pennoyer Sanitarium, Kenosha. Incorporated 1889. Opened for patients 1890. Supported by pay of patients. Value of hospital property, $125,000. Executive Officer, N. A. Pennoyer, M.D., Kenosha, Wis. Number of beds, 100. Number of patients treated last year, 570; cured, 554; relieved, 11; died, 5. Delegate, N. A. Pennoyer, M.D.

Special Homœopathic Hospitals and Institutions.

California.

Southern California State Hospital, Patton. Incorporated 1893. Opened for patients 1893. Supported by legislative appropriations, and contingent fund.. Value of hospital property, $500,000. Executive Officer, Merritt B. Campbell, M.D., Patton, Cal. Number of beds, 517. Number of patients treated last year, 740; cured, 80; relieved, 604; not relieved, 19; died, 37. Delegate, Merritt B. Campbell, M.D.

Armitage Home, San Francisco. No report.

Maria Kip Orphanage, San Francisco. No report.

San Francisco Nursery for Homeless Children, San Francisco. Incorporated 1892. Opened for children 1878. Supported by State aid, and voluntary contributions. Executive Officer, Mrs. William E. Jackson, Hotel St. Nicholas, San Francisco, Cal. Number of children, 113. Number of patients treated last year, 58; cured, 57; died, 1. Delegate, Guy S. Manning, M.D.

Colorado.

Denver Orphan's Home, Denver. Incorporated 1880. Opened for inmates 1881. Supported by city appropriations, and voluntary contributions. Executive Officer, Mrs. George A. Bushnell, 1527 Downing Avenue, Denver, Col. Number of children, 609. Number of patients treated last year, 60; cured, 57; died, 3. Delegate, N. G. Burnham, M.D.

Florida.

Orphanage and Home for the Friendless, Jacksonville. Executive Officer, James M. Baker, Jacksonville, Fla. Supported by voluntary contributions. Value of institution property, $5,000. Number of beds, 20. Number of patients treated last year, 8; cured, 8. Delegate, Henry R. Stout, M.D.

Illinois.

Chicago Nursery and Half Orphan Asylum, Chicago. Incorporated 1865. Opened for inmates 1865. Supported by voluntary contributions. Executive Officer, Mrs. Franklin H. Beckwith, 77 Pine Street, Chicago, Ill. Number of beds, 182. Number of patients treated last year, 237; cured, 235; died, 2.

Foundling Home, Chicago. Incorporated 1872. Opened for inmates 1871. Supported by voluntary contributions. Value of institution property, $100,000. Executive Officer, Mrs. Fannie E. Shipman, 120 South Wood Street, Chicago, Ill. Number of inmates, 426. Number of patients treated last year, 80; cured, 80.

Skiles' Orificial Sanitarium, Chicago. No report.

The Watertown Insane Asylum, Watertown. Executive Officer, Dr. Taylor, Watertown, Ill. Number of beds, 50. No report as to number of patients treated last year.

Iowa.

Home for Aged Women, Cedar Rapids. Incorporated 1888. Opened for inmates 1888. Supported by endowments, and interest on invested funds. Value of institution property, $100,000. Executive Officer, C. H. Cogswell, M.D., 65 Second Avenue, Cedar Rapids, Iowa. Number of beds, 10. Number of patients treated last year, 5; relieved, 4; died, 1. Delegate, C. H. Cogswell, M.D. "The plans for a new building have been adopted and received. We expect to build this year, when the capacity will be five times as great as it is at the present time."

Home for the Friendless, Cedar Rapids. Incorporated 1886. Opened for inmates 1887. Supported by voluntary contributions. Value of institution property, $3,000. Executive Officer, Mrs. G. T. Van Vechten, Cedar Rapids, Iowa. Number of beds, 33. Number of patients treated last year, 86; cured, 85; died, 1. Delegate, C. H. Cogswell, M.D.

Iowa State School for the Deaf, Council Bluffs. Incorporated 1875. Opened for inmates 1878. Supported by State tax and special appropriations. Value of institution property, $300,000. Executive Officer, Henry W. Rothert, Council Bluffs. Number of beds, 300. Number of patients treated last year, 225; cured, 220; relieved, 5. "This institution is the State school for the deaf. All children requiring the attendance of a physician have homœopathic treatment."

Des Moines Home for Friendless Children, Des Moines. Incorporated 1887. Opened for inmates 1887. Supported by voluntary contributions. Value of institution property, $15,000. Executive Officer, Mrs. E. B. Whitcomb, 719 Fifteenth Street, Des Moines, Iowa.

State Reform School, Eldora. Incorporated 1868. Opened for inmates

1868. Supported by State appropriations. Value of institution property, $150,000. Executive Officer, R. J. Miles, Eldora, Iowa. Number of beds, 510. Number of patients treated last year, 153; cured, 153.

Massachusetts.

Boothby Surgical Hospital, Boston. Opened for patients 1889. Supported by pay of patients. Value of hospital property, $50,000. Executive Officer, Alonzo Boothby, M.D., 1061 Beacon Street, Brookline, Mass. Number of beds, 40. Number of patients treated last year, 225; cured, 184; relieved, 28; not relieved, 6; died, 7. Delegate, Alonzo Boothby, M.D.

Consumptive's Home, Boston. No report.

Talitha Cumi Home of the New England Moral Reform Society, Boston. Incorporated 1846. Opened for patients 1836. Executive Officer, Caroline M. Otis, 204 West Brookline Street, Boston, Mass. Number of beds, 29. Number of patients treated last year, 54; cured, 54. Supported by voluntary contributions. Value of institution property, $29,500. Delegate, Caroline M. Hastings, M.D. "Talitha Cumi Home is a maternity hospital; we do not take any other cases."

Framingham Nervine, Framingham. Incorporated 1896. Opened for patients 1896. Executive Officer, Ellen L. Keith, M.D., Framingham, Mass. Supported by pay of patients. Value of hospital property, $12,000. Number of beds, 12. Number of patients treated last year, 27; cured, 9; relieved, 14; not relieved, 4.

Ayer Home for Young Women and Children, Lowell. Incorporated 1875. Opened for inmates 1875. Executive Officer, Miss M. A. Webster, Lowell, Mass. Supported by voluntary contributions, and a legacy. Value of institution property, $40,000. Delegate, G. Forrest Martin, M.D. Number of beds, 52. Number of patients treated last year, 45; cured, 44; died, 1, the first one in seven years. "Having watched the results of homœopathic treatment for the inmates of this home during the past eleven years, we endorse it most emphatically."

Newton Hospital, Homœopathic Department, Newton. Incorporated 1881. Opened for patients 1886. Supported by donations, contributions from the different churches, pay of patients. Value of hospital property, including some new buildings now being built, $125,000. Executive Officer, Edward P. Scales, M.D., Newton, Mass. Number of beds, 75. Number of patients treated last year, 307; cured, 255; relieved, 25; not relieved, 10; died, 17. "The administration is a combination of the two schools of practice, perfectly harmonious." Delegate, George E. May, M.D.

Newton Nervine, West Newton. Opened for patients 1892. Supported by pay of patients. Value of hospital property, $37,500. Executive Officer, N. Emmons Paine, M.D., West Newton, Mass. Number of beds, 18. Number of patients treated last year, 39; cured, 13; relieved, 10; not relieved, 6. Delegate, N. Emmons Paine, M.D.

Newton Sanitarium, West Newton. Opened for patients 1894. Executive Officer, N. Emmons Paine, M.D., West Newton, Mass. Supported by pay of patients. Number of patients admitted last year, 21; cured, 21. Delegate, N. Emmons Paine, M.D.

Westboro Insane Hospital, Westboro. Incorporated 1884. Opened 1886. Executive Officer, George S. Adams, M.D., Westboro, Mass. Supported by State and town appropriations, and pay of patients. Value of hospital property, $433,000. Number of beds, 575. Number of patients treated last year, 869; cured, 73; relieved, 643; not relieved, 102; died, 51. Delegate, George S. Adams, M.D.

Michigan.

Michigan Asylum for Dangerous and Criminal Insane, Ionia. No report.

Minnesota.

Fergus Falls State Hospital for the Insane, Fergus Falls. Incorporated 1887. Opened for patients 1899. Supported by legislative appropriations. Value of hospital property, $850,000. Executive Officer, George O. Welch, M.D., Fergus Falls, Minn. Number of beds, 1,059. Number of patients treated last year, 1,197; cured, 96; relieved, 1,021; not relieved, 37; died, 43. Delegate, George O. Welch, M.D.

Maternity Hospital, Minneapolis. Incorporated 1887. Opened for patients 1886. Supported by voluntary contributions, and pay of patients. Executive Officer, Martha G. Ripley, M.D., 24 South Tenth Street, Minneapolis, Minn. Value of hospital property, $20,000. Number of beds, 20. Number of patients treated last year, 200; cured, 190; relieved, 3; died, 7. Delegate, Martha G. Ripley, M.D. "The Maternity Hospital has added a surgical ward in order to help pay expenses. We have one of the finest locations in the city, a good building of eighteen rooms; we have also five acres of land."

Washburne Memorial Asylum, Minneapolis. No report.

Sheltering Arms for the Care of Orphans and Destitute Children, Minneapolis. No report.

Church Home, St. Paul. Incorporated 1897. Opened for inmates 1896. Supported by board of inmates, and voluntary contributions. Executive Officer, Miss Louisa Rees, 406 Fifteenth Street, Minneapolis, Minn. Number of beds, 6. Number of patients treated last year, 11; cured, 11.

Missouri.

State Lunatic Asylum, No. 1, Fulton. Incorporated 1851. Opened for patients 1851. Executive Officer, J. T. Coombs, M.D., Fulton, Mo. Supported by products of farm, county appropriations, pay of patients. Value of hospital property, $375,000. Number of beds, 808. Number of patients treated last year, 1,040; cured, 178; relieved, 773; not relieved, 9; died, 80. Delegate, J. T. Coombs, M.D.

St. Louis Children's Hospital, St. Louis. Incorporated 1879. Opened for patients 1880. Supported by voluntary subscriptions. Value of hospital property, $25,000. Executive Officer, Charles H. Goodman, M.D., 3329 Washington Avenue, St. Louis, Mo. Number of beds, 60. Number of patients treated last year, 224; cured, 177; relieved, 35; not relieved, 5; died, 7. Delegate, T. Griswold Comstock, M.D.

New York.

Albany House of Shelter, Albany. Incorporated 1869. Opened for inmates 1868. Supported by endowment fund, and private subscriptions. Value of institution property, $45,000. Executive Officer, Robert C. Jones, Albany, N. Y. Number of beds, 27. Number of patients treated last year, 84; cured, 62; relieved, 12; not relieved, 10. Delegate, Edward G. Cox, M.D.

Muncie's Seaside Sanitarium, Babylon. Opened for patients 1897. Supported by pay of patients. Value of institution property, $40,000. Executive Officer, E. H. Muncie, M.D., 117 Macon Street, Brooklyn, N. Y. Number of beds, 58. Number of patients treated last year, 68; cured, 66; not relieved, 1; died, 1. "A post-graduate clinic in orificial surgery is conducted by E. H. Muncie, M.D., L. H. Muncie, M.D., and E. H. Pratt, M.D., of Chicago, every Spring at this sanitarium."

Brooklyn Maternity and New York State School for Training Nurses, Brooklyn. Incorporated 1871. Opened for patients 1871. Supported by State and city appropriations, and voluntary contributions. Value of hospital property, $60,000. Executive Officer, Mrs. George F. Demarest, 459 Greene Avenue, Brooklyn. Number of beds, 45. Number of patients treated last year, 220; cured, 195; relieved, 5; died, 18.

Brooklyn Nursery and Infants' Hospital, Brooklyn. Incorporated 1871. Opened for patients 1890. Supported by collections by managers, and voluntary contributions. Value of hospital property, $55,000. Executive Officer, Mrs. Henry F. Aten, 34 Hanson Place, Brooklyn. Number of beds, 40. Number of patients treated last year, 331; cured, 217; relieved, 16; died, 71; all of those who died were under one year of age. "This institution was originally incorporated on the 7th of August, 1871, as the 'Flatbush Avenue Industrial School and Nursery,' but, on the 15th of February, 1872, an act was passed changing the name to 'The Brooklyn Nursery.' In April, 1890, the petition for addition to name was granted, and the institution is now known as 'The Brooklyn Nursery and Infants' Hospital.' The babies are brought here in very feeble condition. We anticipate building an infants' hospital which shall be an honor to the giver of the present property, and we shall have it so arranged and conducted as to show in better form what Homœopathy can do."

Brooklyn Home for Consumptives, Homœopathic Department, Brooklyn. Incorporated 1881. Opened for patients 1881. Supported by permanent investments, excise fund, city appropriations, voluntary contributions, and membership dues. Executive Officer, Mrs. Alexander Robb, 346 Washington Avenue, Brooklyn, N. Y. Number of beds, 94. Number of patients treated last year, 84; cured, 1; improved, 51; not improved, 6; died, 27. Delegate, Walter B. Winchell, M.D.

Memorial Hospital for Women and Children, Brooklyn. Incorporated 1883. Opened for patients 1888. Supported by city appropriations, collections of managers, voluntary contributions, and pay of patients. Value of hospital property, $140,000. Executive Officer, Mrs. J. H. Burtis, 121 Quincy Street, Brooklyn, N. Y. Number of beds, 65. Number of patients treated last year, 488; cured, 282; relieved, 108; not relieved, 63; died, 25. "The hospital has had a good satisfactory year, in the steady growth in

reputation, and in a larger record of operations, 294 of which have been performed; with an endowment it could accomplish almost untold good; the drawback in this charity is lack of money."

St. Martha's Sanitarium and Dispensary, Brooklyn. Incorporated 1889. Opened for patients 1889. Supported by State appropriations, donations, and contributions of Board of Trustees. Value of hospital property, $49,000. Executive Officer, Miss B. R. Birdsall, 688 Macon Street, Brooklyn, N. Y. Number of beds, 31. Number of patients treated last year, 35; cured, 2; relieved, 5; not relieved, 23; died, 5. "This is a home for chronic and incurable cases, not consumptives and not insanity."

The Bethany House, Brooklyn. Incorporated 1895. Opened for patients 1893. Supported by board of inmates, and private contributions. Value of institution property, $8,500. Number of beds, 10. Number of patients treated last year, 7; cured, 1; relieved, 3; not relieved, 2; died, 1. "The Bethany House is the annex of St. Martha's Sanitarium; it is a home for chronic and incurable cases, and is designed for semi-invalids and convalescents; acute cases are occasionally received."

Collins Farm State Homœopathic Hospital for the Insane, Collins. Incorporated 1895. Opened for patients August 1, 1898. Supported by State appropriations, and pay of private patients. Value of hospital property, $400,000. Executive Officer, Daniel H. Arthur, M.D., Gowanda, N. Y. Number of beds, 400.

Geneva Hygienic Institute. No report.

Interpines, Goshen. Executive Officer, Frederick W. Seward, M.D., Goshen. No report.

Middletown State Homœopathic Hospital, Middletown. Incorporated 1870. Opened for patients 1874. Supported by pay of patients, and State appropriations. Value of hospital property, $1,128,000. Executive Officer, Selden H. Talcott, M.D., Middletown, N. Y. Number of beds, 1,200. Number of patients treated last year, 1,392; cured, 94; relieved, 1,213; not relieved, 8; died, 77. Delegate, Selden H. Talcott, M.D.

Asylum for the Relief of Half Orphan and Destitute Children, New York. Incorporated 1835. Opened for inmates 1835. Supported by city appropriations, and voluntary contributions. Executive Officer, Mrs. John L. Sutherland, 17 West Thirty-seventh Street, New York City. Number of patients treated last year, 60; cured, 59; died, 1. Delegate, A. M. Woodward, M.D.

Baptist Home for the Aged, Homœopathic Department, New York. Incorporated 1869. Opened for inmates 1869. Supported by the Baptist churches of New York City. Executive Officer, Mrs. Theron R. Butler, 433 Fifth Avenue, New York City. Number of beds, 120. Number of patients treated last year, 15; cured, 15. Delegate, Rita Dunlevy, M.D.

Chapin Home for the Aged and Infirm, Homœopathic Department, New York. Incorporated 1869. Opened for inmates 1869. Supported by bequests, and voluntary contributions. Value of institution property, $150,000. Executive Officer, Mrs. Solon Palmer, 266 Bergen Avenue, Jersey City, N. J. Number of beds, 60. Number of patients treated last year, 40; cured, 38; died, 2. Delegate, John B. Garrison, M.D.

Helmuth House, New York. Opened for patients 1886. Supported by pay of patients. Value of hospital property, $90,000. Executive Officer,

William Tod Helmuth, Jr., M.D., 465 Lexington Avenue, New York City. Number of beds, 25. Number of patients treated last year, 238; cured, 181; relieved, 44; not relieved, 9; died, 4. Delegate, William Tod Helmuth, M.D.

. Hospital of Five Points House of Industry, New York. Incorporated 1854. Opened for inmates 1860. Supported by city appropriations, and voluntary contributions. Value of institution property, $200,000. Executive Officer, William F. Barnard, 155 Worth Street, New York City. Number of beds, 100. Number of patients treated last year, 1,486; cured, 1,437; relieved, 42; died, 7.

Laidlaw's Private Hospital, New York. Opened for patients 1859. Supported by pay of patients. Value of hospital property, $50,000. Executive Officer, A. H. Laidlaw, M.D., 137 West Forty-first Street, New York City. Number of beds, 15. Number of patients treated last year, 48; cured, 38; relieved, 8; died, 2. Delegate, A. H. Laidlaw, M.D.

New York Ophthalmic Hospital, New York. Incorporated 1851. Opened for patients 1851. Supported by voluntary contributions, and rent of stores. Value of hospital property, $250,000. Executive Officer, James Worrall Arthur, 56 Cedar Street, New York City. Number of beds, 56. Number of patients treated last year, 604; cured, 505; relieved, 93; not relieved, 4; died, 2.

New York Medical College and Hospital for Women, New York. Incorporated 1863. Opened for patients 1864. Supported by contributions, and board of patients. Executive Officer, D. H. Morris, Westchester, N. Y. Value of hospital property, $50,000. Number of beds, 20. Number of patients treated last year, 210; cured, 198; relieved, 11; died, 1. "Our college department has just closed a very successful year. We open the session of 1898-99 in our new building, at One Hundred and First Street and Manhattan Avenue."

Homer I. Ostrom's Private Surgical Hospital, New York. Incorporated 1896. Opened for patients 1896. Supported by pay of patients. Value of hospital property, $50,000. Executive Officer, Homer I. Ostrom, M.D., 42 West Forty-eighth Street, New York City. Number of beds, 10. Number of patients treated last year, 69; cured, 67; died, 2. "This hospital is open only from October 1 to July 1 in each year. The cases are mostly abdominal and gynæcological."

The West Side Clinic and Hospital, New York. Executive Officer, Irving P. Sherman, M.D., 114 West Forty-fourth Street, New York City. The hospital has not yet been opened for patients.

Glenmary, Owego. Incorporated 1897. Opened for patients 1889. Supported by pay of patients. Value of hospital property, $110,000. Executive Officer, John T. Greenleaf, M.D., Owego, N. Y. Number of beds, 50. Number of patients treated last year, 61; cured, 18; relieved, 34; not relieved, 7; died, 2. Delegate, Lewis D. Hyde, M.D. "New buildings have been built during the year, giving us enlarged facilities."

Ohio.

Ohio Hospital for Women and Children, Cincinnati. Incorporated 1881. Opened for patients 1882. Supported by association membership,

bequests, income from pay beds, voluntary contributions, and entertainments. Value of hospital property, $20,000. Executive Officer, Mrs. M. Oyler, Summit Avenue, Price Hill, Cincinnati, Ohio. Number of beds, 16. Number of patients treated last year, 77; cured, 50; relieved, 14; not relieved, 5; died, 2. Delegate, Ellen M. Kirk, M.D. "Our hospital was closed in July, 1897, for repairs which required so much consideration and time that we were not able to open the house again until December 4, so that our report therefore covers less than seven months of actual work."

Cleveland Bethany Home for Children, Cleveland. Incorporated 1895. Opened for inmates 1894. Supported by voluntary contributions. Executive Officer, Mrs. M. C. Worthington, 985 Euclid Avenue, Cleveland, Ohio. Number of beds, 25. Number of patients treated last year, 39; cured, 12; relieved, 22; not relieved, 4; died, 1. "The Bethany is not a hospital; it is a home for homeless, or worse than homeless, children; some of the patients are convalescents from hospitals; others are crippled, making braces or other appliances necessary; with others, the fathers are dead, and the mothers are compelled to go to service in families where the children would not be received; in these cases, the mother pays something for the care of her child; all of the children in the home were suffering for the want of proper nourishment and judicious care when they were received into it."

Maternity Hospital, Cleveland. Incorporated 1893. Opened for patients 1892. Executive Officer, Mrs. A. G. Carpenter, 125 Streator Avenue, Cleveland, Ohio. Supported by subscriptions, donations, and pay of patients. Number of beds, 7. Number of patients treated last year, 33; cured, 33. Delegate, Martha A. Canfield, M.D.

Dorcas Invalids' Home for Incurables, Cleveland. Incorporated 1867. Opened for patients 1867. Supported by bequests, voluntary contributions, and pay of patients. Value of institution property, $50,000. Executive Officer, Mrs. G. J. Jones, 1068 Case Avenue, Cleveland, Ohio. Number of beds, 40. Number of patients treated last year, 45; relieved, 45. Delegate, G. J. Jones, M.D.

Oregon.

Boys' and Girls' Aid Society of Oregon, Portland. Incorporated 1896. Opened for inmates 1896. Supported by voluntary contribution. Value of institution property, $15,000. Executive Officer, William T. Gardyer, Portland, Ore. Number of beds, 46. Number of patients treated last year, 25; cured, 25. Delegate, Byron E. Miller, M.D.

Children's Home, Portland. Incorporated 1870. Opened for inmates 1870. Supported by endowment fund, State appropriations, and private subscriptions. Value of institution property, $50,000. Delegate, Henry C. Jefferds, M.D. Number of beds, 100. "No record of the cases treated are kept; there were no deaths, and no severe cases, except some of the twenty-one cases of measles, of which we had an epidemic. We also had epidemics of mumps and whooping cough."

Pennsylvania.

Boys' Boarding Home, Allegheny. No report.

Christian Home for Women, Allegheny. No report.

Convent of Benedictine Sisters, Erie. Opened for inmates 1865. Executive Officer, Mother Superior, 322 East Minot Street, Erie, Pa. Supported by voluntary contributions. Number of beds, 10. Number of patients treated last year, 158; cured, 109; relieved, 45; not relieved, 3; died, 1. Delegate, Edward Cranch, M.D.

Home for the Aged Poor, conducted by Little Sisters of the Poor, Pittsburg. Incorporated 1874. Opened for inmates 1884. Supported by voluntary contributions. Value of institution property, $150,000. Executive Officer, Mother Superior of the Little Sisters of the Poor, Premen and Rebecca Streets, Pittsburg, Pa. Number of beds, 170. Number of patients treated last year, 80; cured, 38; relieved, 24; not relieved, 2; died, 16. Delegate, L. G. Rousseau, M.D.

Protestant Home for Incurables, Homœopathic Department, Pittsburg. Incorporated 1883. Opened for patients 1885. Supported by endowment fund, admission fees, and voluntary contributions. Value of institution property, $100,000. Executive Officer, Mrs. G. M. T. Taylor, 5533 Hays Street, Pittsburg, Pa. Number of beds, 41. Number of patients treated last year, 5; relieved, 5. Physician in charge, James H. Thompson, M.D. "We have very few patients who prefer to be treated by the homœopathic doctors; all others are treated by regulars."

Wisconsin.

Milwaukee House of Mercy. No report.

Milwaukee Infants' Home. No report.

Milwaukee Orphan Asylum. Executive Officer, Mrs. C. G. Stark, Milwaukee, Wis. Attending physician, F. F. John, M.D., 223 Germania Building, Milwaukee, Wis.

Homœopathic Dispensaries.

California.

Hahnemann Dispensary, San Francisco. Incorporated 1883. Opened for patients 1883. Executive Officer, William Boericke, M.D., 1812 Washington Street, San Francisco, Cal. Number of patients treated last year, 2,035. Number of prescriptions, 7,274. Number of outside visits made, 63. Cost of conducting dispensary last year, $800. Delegate, William Boericke, M.D.

Pacific Homœopathic Dispensary, San Francisco. Incorporated 1876. Opened for patients 1877. Executive Officer, Mrs. Marguerite McKee Clarke, 636 Valencia Street, San Francisco, Cal. Number of patients treated last year, 814. Number of prescriptions last year, 4,169. Cost of conducting dispensary last year, $1,207.20. "We are standing guard, not shouting much, but always ready to press forward in the interests of Homœopathy."

Southern Homœopathic Dispensary, San Francisco. No report.

Colorado.

Tabernacle Homœopathic Free Dispensary, Denver. Opened for patients 1895. Executive Officer, Samuel F. Shannon, M.D., P. O. Box 1513,

Denver, Col. Number of patients treated last year, 1,124. Number of prescriptions made last year, 2,922. Number of outside visits made last year, 368. Cost of conducting dispensary last year, $86.80. Delegate, Samuel F. Shannon, M.D.

Connecticut.

Homœopathic Free Dispensary, Bridgeport. Opened for patients 1894. Executive Officer, David W. Ingalls, M.D., 309 State Street, Bridgeport, Conn. Number of patients treated last year, 208. Number of prescriptions last year, 717. Number of outside visits made last year, 328.

Delaware.

Homœopathic Free Dispensary, Wilmington. Incorporated 1888. Opened for patients 1888. Executive Officer, Mrs. Emma Quigley, Eighth and Jefferson Streets, Wilmington, Del. Number of patients treated last year, 1,639. Number of prescriptions last year, 5,271. Delegate, Lewis W. Flinn, M.D.

Illinois.

Chicago Homœopathic Free Dispensary, Chicago. Incorporated 1876. Opened for patients 1876. Executive Officer, Judson E. Hetherington, M.D., 1035 Warren Avenue, Chicago, Ill. Number of patients treated last year, 2,980. Number of prescriptions last year, 14,476. Number of outside visits made last year, 730. Cost of conducting dispensary last year, $420. Delegate, Judson E. Hetherington, M.D.

Dunham Dispensary, Chicago. Incorporated 1895. Opened for patients 1895. Executive Officer, Herman W. Pierson, M.D., 100 State Street, Chicago, Ill. Number of patients treated last year, 839. Number of prescriptions last year, 4,716. Number of outside visits last year, 756. Cost of conducting dispensary last year, $225. Delegate, Herman W. Pierson, M.D.

International Free Dispensary, Chicago. Incorporated 1890. Opened for patients 1890. Executive Officer, L. D. Rogers, M.D., 441 Dearborn Avenue, Chicago, Ill. Number of patients last year, 2,165. Number of prescriptions last year, 10,175. Number of outside visits last year, 265. Cost of conducting dispensary last year, $600. Delegate, L. D. Rogers, M.D.

Mayflower Dispensary, Chicago. Opened for patients 1896. Executive Officer, D. N. MacMullen, M.D., 6500 Wentworth Avenue, Chicago, Ill. Number of patients treated last year, 347. Number of prescriptions last year, 2,471. Number of outside visits last year, 430. Cost of conducting dispensary last year, $300. Delegate, Herman W. Pierson, M.D.

Iowa.

City Free Dispensary of Council Bluffs. Incorporated 1882. Opened for patients 1882. Executive Officer, Miss Emily Blancette, Council Bluffs, Iowa. Number of patients treated last year, 209. Number of prescriptions last year, 683. Number of outside visits last year, 20. Cost of con-

ducting dispensary last year, $40. Delegate, Phineas J. Montgomery, M.D.

Kentucky.

Covington Homœopathic Free Dispensary, Covington. Opened for patients 1896. Executive Officer, J. A. Davis, M.D., 723 Madison Avenue, Covington, Ky. Number of patients treated last year, 1,129. Number of prescriptions last year, 4,365. Number of outside visits made last year, 236. Cost of conducting dispensary last year, $126.50. Delegate, William F. Reilly, M.D.

Maryland.

Maryland Homœopathic Hospital and Free Dispensary, Baltimore. Incorporated 1899. Opened for patients 1890. Executive Officer, John T. Graham, Baltimore, Md. Number of patients treated last year, 4,083. Number of prescriptions last year, 18,064. Number of outside visits made last year, 2,005.

Southern Homœopathic College Dispensary, Baltimore. Incorporated 1890. Opened for patients 1890. Executive Officer, Henry Chandlee, M.D., 704 West North Avenue, Baltimore, Md. Number of patients treated last year, 2,516. Number of prescriptions last year, 5,177. Number of outside visits made last year, 782.

Massachusetts.

Homœopathic Medical Dispensary, Boston. Incorporated 1856. Opened for patients 1857. Executive Officer, I. Tisdale Talbot, M.D., 687 Boylston Street, Boston, Mass. Number of patients treated last year, 17,389. Number of prescriptions last year, 51,946. Number of outside visits made last year, 3,028. Cost of conducting dispensary last year, $3,236.83. Delegate, Alonzo Boothby, M.D.

Homœopathic Medical Dispensary, Burrough's Place Branch, Boston. Incorporated 1856. Opened for patients 1876. Executive Officer, I. Tisdale Talbot, M.D., 687 Boylston Street, Boston, Mass. Number of patients treated last year, 254. Number of prescriptions last year, 1,435. Cost of conducting dispensary last year, $79.26. Delegate, H. M. Powers, M.D.

Homœopathic Medical Dispensary, West End Branch, Boston. Incorporated 1856. Opened for patients 1875. Executive Officer, I. Tisdale Talbot, M.D., 687 Boylston Street, Boston, Mass. Number of patients treated last year, 1,638. Number of prescriptions last year, 4,451. Number of outside visits made last year, 155. Cost of conducting dispensary last year, $707.55. Delegate, Herbert C. Clapp, M.D.

Lowell Homœopathic Free Dispensary Association, Lowell. Opened for patients 1894. Executive Officer, G. Forrest Martin, M.D., 17 Kirk Street, Lowell, Mass. Number of patients treated last year, 324. Number of prescriptions last year, 1,402. Delegate, F. A. Warner, M.D. "This association now runs its clinics at the Out-Patient Department of the Lowell General Hospital, and its work for the last year was divided as follows: General Medicine, 542; Eye and Ear, 362; Gynæcological, 174."

Roxbury Homœopathic Dispensary, Roxbury. Executive Officer, Mrs. William L. Jackson, 76 Dudley Street, Roxbury, Mass. Number of pa-

tients treated last year, 424. Number of prescriptions last year, 2,673. Number of outside visits made last year, 1,468. Cost of conducting dispensary last year, $740. Delegate, William L. Jackson, M.D.

Worcester Homœopathic Hospital and Dispensary Association, Worcester. Incorporated 1885. Opened for patients 1880. Executive Officer, Edgar A. Fisher, M.D., 121 Pleasant Street, Worcester, Mass. Number of patients treated last year, 1,378. Number of prescriptions last year, 2,837. Cost of conducting dispensary last year, $607.58. Delegate, Edgar A. Fisher, M.D.

Michigan.

The Grace Hospital Dispensary, Detroit. Incorporated 1886. Opened for patients 1888. Executive Officer, A. T. Putnam, Grace Hospital, Detroit, Mich. Number of patients last year, 6,431. Number of prescriptions last year, 15,932.

Minnesota.

University Homœopathic Free Dispensary, Minneapolis. Opened for patients 1888. Executive Officer, George E. Ricker, M.D., Syndicate Block, Minneapolis, Minn. Number of patients treated last year, 6,025. Number of prescriptions last year, 18,259. Outside visits made last year, 398. Cost of conducting dispensary last year, $457. Delegate, George E. Ricker, M.D.

Missouri.

Homœopathic Free Dispensary, St. Louis. Opened to patients 1869. Executive Officer, James A. Campbell, M.D., 1729 Washington Avenue, St. Louis, Mo. Number of patients treated last year, 2,520. Number of prescriptions last year, 8,316. Number of outside visits made last year, 190. Cost of conducting dispensary last year, $225. Delegate, James A. Campbell, M.D.

New Jersey.

West Jersey Homœopathic Hospital and Dispensary, Camden. Incorporated 1891. Opened for patients 1891. Executive Officer, Wilfred M. Kaighn, 250 Mt. Vernon Street, Camden, N. J. Number of patients treated last year, 7,287. Number of prescriptions last year, 24,009. Number of outside visits made last year, 5,008. Cost of conducting dispensary last year, $873.07. Delegate, Wallace McGeorge, M.D.

East Orange Homœopathic Dispensary, Orange, N. J. Incorporated 1883. Opened for patients 1883. Executive Officer, Miss Emma L. Lindsley, 27 High Street, Orange, N. J. Number of patients treated last year, 239. Number of prescriptions last year, 598. Cost of conducting dispensary last year, $315.32.

New York.

Albany City Homœopathic Hospital and Dispensary, Albany. Incorporated 1868. Opened for patients 1868. Executive Officer, J. W. Cox, 109 State Street, Albany, N. Y. Number of patients treated last year,

2,467. Number of prescriptions last year, 12,508. Delegate, Edward G. Cox, M.D.

Brooklyn Homœopathic Hospital Dispensary, Brooklyn. Incorporated 1859. Opened for patients 1859. Executive Officer, William L. Love, M.D., 1188 Dean Street, Brooklyn, N. Y. Number of patients last year, 17,386. Number of prescriptions last year, 28,765. Delegate, William L. Love, M.D.

Brooklyn E. D. Homœopathic Dispensary, Brooklyn. Executive Officer, George V. Tompkins, 96 Wilson Street, Brooklyn, N. Y. Number of patients last year, 7,685. Number of prescriptions last year, 24,335. Delegate, Edwin Rodney Fiske, M.D.

Central Homœopathic Dispensary, Brooklyn. Incorporated 1883. Opened for patients 1883. Executive Officer, Mrs. H. M. Johnston, 67 Downing Street, Brooklyn, N. Y. Number of patients treated last year, 19,345. Number of prescriptions last year, 56,892. Number of outside visits last year, 810. Cost of conducting dispensary last year, $1,934.82. Delegate, E. W. Avery, M.D. "The dispensary has been conducted under moderate expense, and we have not been harassed by debts; this fact has afforded us much comfort. We were able to pay cash down for the ground upon which to build, but had to take a loan to enable us to erect the building. The dispensary is on Howard Avenue, a poor neighborhood, and we have been able to do much good there."

St. Lazarus Free Dispensary, Brooklyn. Incorporated 1889. Opened for patients 1889. Executive Officer, Miss B. R. Birdsall, 688 Macon Street, Brooklyn, N. Y. Number of patients treated last year, 802. Number of prescriptions last year, 1,760.

Memorial Dispensary, Brooklyn. Incorporated 1894. Opened for patients 1883. Executive Officer, Mary L. Lines, M.D., 344 Washington Avenue, Brooklyn, N. Y. Number of patients treated last year, 4,248. Number of prescriptions last year, 7,133. Number of outside visits made last year, 392. Cost of conducting dispensary last year, $1,998.80. Delegate, Mary L. Lines, M.D.

Gates Avenue Homœopathic Dispensary, Brooklyn. Incorporated 1867. Opened for patients 1867. Executive Officer, D. R. Aldridge, 32 Burling Slip, New York City. Number of patients treated last year, 3,990. Number of prescriptions last year, 12,039. Outside visits made last year, 608. Cost of conducting dispensary last year, $981.87.

Twenty-sixth Ward Homœopathic Dispensary, Brooklyn. Incorporated 1894. Opened for patients 1894. Executive Officer, A. A. Ashman, 1073 Bergen Street, Brooklyn, N. Y. Number of patients treated last year, 2,459. Number of prescriptions last year, 4,589. Cost of conducting dispensary last year, $588.21.

Homœopathic Hospital and Dispensary of Mount Vernon. Incorporated 1896. Opened for patients 1895. Executive Officer, William B. Davis, 117 Glen Avenue, Mount Vernon, N. Y. Number of patients last year, 368. Number of prescriptions, 1,011. Number of outside visits, 549. Cost of conducting dispensary, $59.55. Delegate, Nathan Nutting, M.D.

Dispensary of the New York Medical College and Hospital for Women, New York. Incorporated 1863. Opened for patients 1864. Executive Officer, Harriet D'E. Keatinge, M.D., 119 West Forty-seventh Street, New

York City. Number of patients treated last year, 2,459. Number of prescriptions last year, 9,627. Outside visits made last year, 306. Delegate, Henry M. Dearborn, M.D.

Hahnemann Hospital Dispensary, New York. No report.

Harlem Homœopathic Hospital, Outside Department, New York. Incorporated 1898. Opened for patients 1896. Executive Officer, Floyd P. Sheldon, M.D., 223 West One Hundred and Twenty-second Street, New York City. Number of patients treated last year, 1,138. Number of prescriptions last year, 2,815. Outside visits made last year, 441.

New York Homœopathic Medical College Dispensary, New York. Incorporated 1861. Opened for patients 1861. Executive Officer, John W. Dowling, M.D., 8 West Forty-fifth Street, New York City. Number of patients treated last year, 3,092. Number of prescriptions last year, 6,110. Number of outside visits last year, 370. Cost of conducting dispensary last year, $500. Delegate, John W. Dowling, M.D.

Dispensary of New York Ophthalmic Hospital, New York. Incorporated 1852. Opened for patients 1851. Executive Officer, James Worrall Arthur, 56 Cedar Street, New York City. Number of patients treated last year, 15,336. Number of prescriptions last year, 47,915.

West Side Clinic and Hospital, New York. Opened for patients 1894. Executive Officer, Irving P. Sherman, M.D., 114 West Forty-fourth Street, New York City. Number of patients treated last year, 2,023. Number of prescriptions last year, 8,871. Number of outside visits made last year, 1,095. Cost of conducting dispensary last year, $741.86. Delegate, Irving P. Sherman, M.D.

Western Homœopathic Dispensary, New York. No report.

Homœopathic Free Dispensary, Rochester. No report.

Syracuse Homœopathic Free Dispensary, Syracuse. Incorporated 1890. Opened for patients 1890. Executive Officer, C. E. Hinman, M.D., 114 Slocum Avenue, Syracuse, N. Y. Closed temporarily.

Ohio.

Free Dispensary of the Ohio Hospital for Women and Children, Cincinnati. Incorporated 1881. Opened for patients 1881. Executive Officer, F. Irene Hurst, M.D., 549 West Seventh Street, Cincinnati, Ohio. Number of patients treated last year, 572. Number of prescriptions last year, 1,048. Number of outside visits made last year, 59. Cost of conducting the dispensary last year, $16.40. Delegate, Laura C. Brickley, M.D.

Homœopathic Free Dispensary, Cincinnati. Incorporated 1867. Opened for patients 1867. Executive Officer, Charles E. Walton, M.D., Seventh and John Streets, Cincinnati, Ohio. Number of patients last year, 5,972. Number of prescriptions last year, 23,320. Number of outside visits made last year, 1,175. Delegate, Charles E. Walton, M.D.

Dispensary of Cleveland Homœopathic Medical College, Cleveland. Incorporated 1890. Opened for patients 1890. Executive Officer, C. C. True, M.D., 176 Euclid Avenue, Cleveland, Ohio. Number of patients last year, 7,656. Number of prescriptions last year, 18,701. Number of outside visits made last year, 1,876.

Free Medical and Surgical Dispensary for Women and Children, Cleve-

land. Incorporated 1895. Opened for patients 1878. Executive Officer, Martha M. Stone, M.D., 914 Prospect Street, Cleveland, Ohio. Number of patients last year, 875. Number of prescriptions last year, 3,965. Number of outside visits made last year, 484. Cost of conducting dispensary last year, $3,000.

Oregon.

Dispensary of the Presbyterian Chinese Mission, Portland. Opened for patients 1894. Executive Officer, Rev. W. S. Holt, 209 Second Street, Portland, Ore. Number of patients treated last year, 61. Number of prescriptions last year, 136. Cost of conducting dispensary last year, $78.15.

Pennsylvania.

Children's Homœopathic Hospital of Philadelphia, Out Patient Department, Philadelphia. Incorporated 1877. Opened for patients 1877. Executive Officer, N. F. Lane, M.D., 926 North Broad Street, Philadelphia, Pa. Number of patients treated last year, 40,639. Number of prescriptions last year, 131,084. Number of outside visits made last year, 4,975. Delegate, Bushrod W. James, M.D.

Hahnemann Medical College Dispensary of Philadelphia. Incorporated 1848. Opened for patients 1848. Executive Officer, William G. Foulke, Franklin Building, Philadelphia, Pa. Number of patients treated last year, 27,596. Number of prescriptions last year, 96,873. Number of outside visits made last year, 1,680. Delegate, Charles Mohr, M.D.

Dispensary of the Post Graduate School of Homœopathics, Philadelphia. Incorporated 1891. Opened for patients 1891. Executive Officer, W. F. Kaercher, M.D., 1452 North Eleventh Street, Philadelphia, Pa. Number of patients treated last year, 1,922. Number of prescriptions last year, 15,935. Number of outside visits made last year, 6,104. Cost of conducting dispensary last year, $1,500.

St. Luke's Homœopathic Dispensary, Philadelphia. Incorporated 1895. Opened for patients 1895. Executive Officer, George W. Stewart, M.D., Oak Lane, Philadelphia, Pa. Number of patients treated last year, 3,305. Number of prescriptions last year, 11,233. Number of outside visits made last year, 207. "The work in dispensary, notwithstanding the want of proper facilities and restrictions in space, has been up to date in every particular, and compares favorably in this respect with any other institution in Philadelphia."

Dispensary of the Woman's Homœopathic Association of Pennsylvania Medical, Surgical, and Maternity Hospital, Philadelphia. Incorporated 1882. Opened for patients 1884. Executive Officer, Mrs. F. B. Skinner, Provident Building, Philadelphia, Pa. Number of patients treated last year, 4,309. Number of prescriptions last year, 12,509. Number of outside visits made last year, 3,458.

Woman's Southern Homœopathic Dispensary, Philadelphia. Incorporated 1896. Opened for patients 1896. Executive Officer, Miss Annie M. Miller, 1911 Mount Vernon Street, Philadelphia, Pa. Number of patients treated last year, 2,171. Number of prescriptions last year, 3,535. Num-

ber of outside visits made last year, 1,628. Cost of conducting dispensary last year, $1,552.60.

Homœopathic Medical and Surgical Hospital and Dispensary of Pittsburg. Incorporated 1866. Opened for patients 1866. Executive Officer, W. D. Slack, Homœopathic Hospital, Pittsburg, Pa. Number of patients treated last year, 22,858. Number of prescriptions last year, 78,616. Delegate, James H. McClelland, M.D.

Homœopathic Medical and Surgical Hospital and Dispensary, Reading. Incorporated 1887. Opened for patients 1887. Executive Officer, H. F. Schantz, M.D., Reading, Pa. Number of patients last year, 1,328. Number of prescriptions last year, 2,574.

Rhode Island.

Providence Free Homœopathic Dispensary, Providence. Incorporated 1883. Opened for patients 1874. Executive officer, Charles Witter Bowen, 417 Westminster Street, Providence, R. I. Number of patients treated last year, 2,778. Number of prescriptions last year, 3,681. Number of outside visits made last year, 311. Cost of conducting dispensary last year, $596.81. Delegate, George B. Peck, M.D.

Virginia.

Richmond Homœopathic Free Dispensary, Richmond. Opened for patients 1897. Executive Officer, H. S. Corey, M.D., 312 West Grace Street, Richmond, Va. Number of patients treated last year, 5,177. Number of prescriptions last year, 13,918. Delegate, H. S. Corey, M.D.

Homœopathic Journals.

The American Homœopathist. Established 1876. Published semimonthly, quarto form, by A. L. Chatterton & Co., 133 William Street, New York City. Edited by Frank Kraft, M.D., 57 Bell Avenue, Cleveland, Ohio. Subscription price, $2.00. Thirty-two pages in each number.

The Chironian. Established 1884. Published monthly during the college year, quarto form, by students of the New York Homœopathic Medical College. Edited by J. E. Burt, Asbury Park, N. J. Subscription price, $1.00. Twenty pages in each number.

The Clinical Reporter. Established 1887. Published monthly, quarto form, by Shulby Publishing Co., 1017 Lucas Avenue, St. Louis, Mo. Edited by J. Martine Kershaw, M.D., 3421 Washington Avenue, St. Louis, Mo. Subscription price, $1.00. Thirty-two to forty-eight pages in each number.

The Clinique. Established 1880. Published monthly, octavo form, by C. Gurnee Fellows, M.D., 70 State Street, Chicago, Ill. Edited by Reuben Ludlam, M.D., 1823 Michigan Avenue, Chicago, Ill. Fifty-six to seventy-two pages in each number. Subscription price, $2.00.

The Critique. Established 1894. Published monthly, octavo form, by Denver Journal Publishing Co., 16 Steele Block, Denver, Col. Edited by Samuel S. Smythe, M.D., 403 California Building, Denver, Col. Forty pages in each number. Subscription price, $1.00.

The Hahnemannian Advocate. Established 1895. Published monthly. octavo form, by the Hahnemann Publishing Co., 100 State Street, Chicago. Edited by Herman W. Pierson, M.D., 6600 Gale Street, Chicago, Ill. One hundred and four pages in each number. Subscription price, $3.00.

The Hahnemann Institute. Established 1893. Published monthly, during the college term, octavo form, by J. A. T. Gray, Jr., M.D., Chester, Pa. Edited by G. R. Cirtchlon, M.D., 74 Cottage Street, Buffalo, N. Y. Forty-eight pages in each number. Subscription price, $1.00.

The Hahnemannian Monthly. Established 1865. Published monthly, octavo form, by William W. Van Baun, M.D., 1402 Spruce Street, Philadelphia, Pa. Edited by William W. Van Baun, M.D., 1402 Spruce Street, Philadelphia, Pa. One hundred and ten pages in each number. Subscription price, $3.00.

The Homœopathic Envoy. Established 1891. Published monthly, quarto form, by E. P. Anshutz, P. O. Box 921, Philadelphia, Pa. Edited by E. P. Anshutz, P. O. Box 921, Philadelphia, Pa. Eight pages in each number. Subscription price, Twenty-five cents.

The Homœopathic Eye, Ear, and Throat Journal. Established 1895. Published monthly, octavo form, by the Homœopathic Eye, Ear, and Throat Journal Co., 111 East Seventieth Street, New York City. Edited by Arthur B. Norton, M.D., Charles H. Helfrich, M.D., John B. Garrison, M.D., George W. McDowell, M.D., New York City. Thirty-two to sixty-four pages in each number. Subscription price, $2.00.

The Homœopathic Guide. Established 1895. Published monthly, quarto form, by Allison Clokey, M.D., Second and Chestnut Streets, Louisville, Ky. Edited by Allison Clokey, M.D., Second and Chestnut Streets, Louisville, Ky. Twelve pages in each number. Subscription price, Fifty cents.

The Homœopathic Journal of Obstetrics, Gynæcology, and Pædology. Established 1879. Published bi-monthly, octavo form, by A. L. Chatterton & Co., 133 William Street, New York City. Edited by B. F. Underwood, M.D., 102 Fulton Street, New York City. One hundred and sixteen pages in each number. Subscription price, $4.00.

The Homœopathic Physician. Established 1881. Published monthly, octavo form, by Walter M. James, M.D., 1231 Locust Street, Philadelphia, Pa. Edited by Walter M. James, M.D., 1231 Locust Street, Philadelphia, Pa. Forty-eight pages in each number. Subscription price, $2.50.

The Homœopathic Recorder. Established 1886. Published monthly, octavo form, by Boericke & Tafel, 1011 Arch Street, Philadelphia, Pa. Edited by E. P. Anshutz, P. O. Box 921, Philadelphia, Pa. Forty-eight pages in each number. Subscription price, $1.00.

The Journal of Electro Therapeutics. Established 1882. Published monthly, octavo form, by A. L. Chatterton & Co., 133 William Street, New York City. Edited by William H. King, M.D., 64 West Fifty-first Street, New York City. Thirty-six pages in each number. Subscription price, $2.00.

The Journal of Homœopathics. Established 1897. Published monthly, 12mo. form, by J. T. Kent, M.D., 2009 Walnut Street, Philadelphia, Pa. Edited by J. T. Kent, M.D., 2009 Walnut Street, Philadelphia, Pa. Forty pages in each number. Subscription price, $2.00.

The Journal of Ophthalmology, Otology, and Laryngology. Established 1889. Published quarterly, octavo form, by A. L. Chatterton & Co., 133 William Street, New York City. Edited by Charles Deady, M.D., 110 West Forty-eighth Street, New York City. One hundred pages in each number. Subscription price, $4.00.

The Journal of Orificial Surgery. Established 1892. Published monthly, octavo form, by E. H. Pratt, M.D., 100 State Street, Chicago, Ill. Edited by E. H. Pratt, M.D., 100 State Street, Chicago, Ill. Forty-eight pages in each number. Subscription price, $2.00.

The Medical Arena. Established 1892. Published monthly, octavo form, by A. E. Neumeister, M.D., 1214 Main Street, Kansas City, Mo. Edited by S. C. Delap, M.D., 1214 Main Street, Kansas City, Mo. Thirty-two pages in each number. Subscription price, $1.00.

The Medical Century. Established 1893. Published monthly, quarto form, by Medical Century Publishing Co., 503 Fifth Avenue, New York City, and 100 State Street, Chicago, Ill. Edited by Charles E. Fisher, M.D., 100 State Street, Chicago, Ill. Sixty-eight pages in each number. Subscription price, $3.00.

The Medical Counsellor. Established 1881. Published monthly, octavo form, by Medical Counsellor Publishing Club, 16 Adams Avenue, West Detroit, Mich. Edited by Stephen H. Knight, M.D., 18 West Willis Avenue, Detroit, Mich. Fifty pages in each number. Subscription price, $1.00.

The Medical Era. Established 1883. Published monthly, quarto form, by Era Publishing Co., Chicago, Ill. Edited by Charles Gatchell, M.D., 162 Thirtieth Street, Chicago, Ill. Forty-eight pages in each number. Subscription price, $1.00. "Others may follow, but the Era will lead."

The Medical Student. Established 1886. Published monthly, quarto form, by Senior Students of the Boston University School of Medicine. Edited by Wesley T. Lee, Boston University School of Medicine, Boston, Mass. Twenty-four pages in each number. Subscription price, $1.00.

The Medical Visitor. Established 1884. Published monthly, quarto form, by Halsey Bros.' Co., Chicago, Ill. Edited by Wilson A. Smith, M.D., 65 Washington Street, Chicago, Ill. Sixty-four pages in each number. Subscription price, $1.00.

The Minneapolis Homœopathic Magazine. Established 1892. Published monthly, octavo form, by Magazine Publishing Co., 608 Nicollet Avenue, Minneapolis, Minn. Edited by Henry C. Aldrich, M.D., 313 Medical Building, Minneapolis, Minn. Thirty-two pages in each number. Subscription price, $1.00.

The New England Medical Gazette. Established 1865. Published monthly, octavo form, by Otis Clapp & Son, 10 Park Square, Boston, Mass. Edited by John L. Coffin, M.D., 229 Berkeley Street, Boston, Mass. Forty-eight pages of reading matter in each number. Subscription price, $2.00.

The North American Journal of Homœopathy. Established 1852. Published monthly, octavo form, by Redfield Bros., 411-415 Pearl Street, New York City. Edited by Eugene H. Porter, M.D., 181 West Seventy-third Street, New York City. One hundred and twelve pages in each number. Subscription price, $3.00.

The Southern Journal of Homœopathy. Established 1883. Published monthly, octavo form, by Henry Chandlee, M.D., 704 West North Avenue,

Baltimore, Md. Edited by Henry Chandlee, M.D., 704 West North Avenue, Baltimore, Md. Seventy-six pages in each number. Subscription price, $1.00.

The Syracuse Clinic. Established 1898. Published quarterly, quarto form, by D. Mason & Co., Syracuse, N. Y. Edited by E. Elmer Keeler, M.D., 452 South Salina Street, Syracuse, N. Y. Twenty pages in each number. Subscription price, Twenty-five cents.

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AMERICAN INSTITUTE OF HOMŒOPATHY.—STATISTICS OF COLLEGES AND MEDICAL SCHOOLS, 1897-98.

Name of College or Medical School.	When Incorporated.	When Opened to Students.	Name and Address of the Dean.	Length of Each Yearly Course & Time Course Commences.	Number of Courses requisite for Graduation.	Number of Students in Attendance the Past Year	Number of Graduates at Last Commencement.	Number of Alumni.	Number of Faculty.	Number of Professors.	Number of Lecturers.	Estimated Value of College Buildings and Land.	Amount of Endowment.	Amount of Debt.	Amount of Annual Income.	Delegates.
1. Hahneman Hospital College, of San Francisco.	1883	1884	A. C. Peterson, M.D., 135 Geary St., San Francisco, Cal.	28 weeks. Sept. 30th.	4	18	2	140	15	....	3	$8,000			$4,000.00	
2. Denver Homœopathic Medical College and Hospital.	1894	1894	S. S. Smythe, M.D., 403 California Building, Denver, Col.	6 months. October.	4	43	13	29	18	18	10	5,500	None.	None.	7,288.65	S. S. Smythe, M.D. B. A. Wheeler, M.D.
3. Hahnemann Medical College and Hospital, of Chicago.	1855	1860	C. H. Vilas, M.D., Central Music Hall, Chicago, Ill.	6 months. Sept. 14th.	4	172	28	2,300	41	17	24	191,000	$70,000	$50,000	37,000.00	Joseph P. Cobb, M.D. G. F. Shears, M.D.
4. Chicago Homœopathic Medical College.	1876	1876	J. S. Mitchell, M.D., 2954 Prairie Av., Chicago, Ill.	6 months. Sept. 14th.	4	137	30	886	46	26	20	125,000	10,000	16,000	14,000.00	J. S. Mitchell, M.D. N. B. Delamater, M.D.
5. Hering Medical College	1892	1892	H. C. Allen, M.D., 5142 Washington Av., or 100 State St., Chicago, Ill.	7 months. Sept. 13th.	4	56	13	101	22	22	16	25,000	.....	.....	About 5,500.00	H. C. Allen, M.D. J. J. Thompson, M.D.
6. National Medical College...	1891	1891	C. C. Bernard, M.D., 452 Dayton St., Chicago, Ill.	6½ months. Sept. 15th.	4	121	15	105	45	21	24	....	.....	... ...	8,000.00	T. C. Duncan, M.D.
7. Homœopathic Med. Dept. of the State Univ. of Iowa.	1876	1877	W. H. Dickinson, M.D., Des Moines, Ia.	6 months. Sept. 14th.	4	65	8	200	14	12	5	35,000	None.	None.	10,000.00 10,000.00	L. D. Rogers, M.D. George Royal, M.D. C. H. Cogswell, M.D.
8. Southwestern Homœopathic College.	1891	1893	A. Light Monroe, M.D., Louisville, Ky.	6 months. September.	4											
9. Kansas City Homœopathic Medical College.	1888	1888	Peter Deiderich, M.D., Kansas City, Mo.	6 months. Sept. 15th.	4	43	14	85	32	32	.....	10,000	.....	.....	3,000.00	A. E. Neumeister, M.D. L. C. Delap, M.D
10. College of Homœo. Med. and Surg., of Kansas C'y Univ.	1896	1896	W. H. Jenny, M.D., 12th St. and Broadway, Kansas City, Mo.	26 weeks. Sept. 15th.	4	18	None.	1	26	14	12		See note [1].	None.	....	N. H. Jenny, M.D. Frank Elliott, M.D.
11. Southern Homœopathic Medical College and Hosp.	1890	1891	Henry Chandlee, M.D., 704 W. North Av., Baltimore, Md.	6 months Oct. 1st.	4	35	7	50	23	14	9	30,000	... ...	... ...	.....	Henry Chandlee, M.D. O. E. Janney, M.D.
12. Boston University School of Medicine.	1869	1872	I. T. Talbot, M.D., 685 Boylston St., Boston, Mass.	8 months. Oct. 14th.	4	195	46	756	52	17[2]	9[3]	160,000	40,000	34,000	30,000.00	I. T. Talbot, M.D. J. P. Sutherland, M.D.
13. Homœopathic Med. College in Univ. of Michigan.[4]	1874	1875	W. B. Hinsdale, M.D., Ann Arbor, Mich.	9 months. Oct. 1st.	4	64	6	328	....	5	4	.....	State.	.....	.....	W. B. Hinsdale, M.D. R. S. Copeland, M.D.
14. College of Homœo. Med. and Surg. of Univ. of Minn.[5]	1888	1888	A. P. Williamson, M.D., Minneapolis, Minn.	8½ months. Sept. 14th.	4	27	.....	59	16	16	.....	.....	.....	.....	.....	W. E. Leonard, M.D. T. J. Gray, M.D.
15. Homœopathic Medical College of Missouri.	1857	1859	William C. Richardson, M.D., 411 Olive St., St. Louis, Mo.	6 months. October.	4	60	26	550	27	21	6	10,000	None.	5,500	2,400.00	W. C. Richardson, M.D. T. G. Comstock, M.D.
16. New York Homœopathic Med. College and Hosp.	1860	1860	William Todd Helmuth, M.D., 504 Fifth Av., New York, N. Y.	7 months. October.	4	132	24	1,403	44	25	13[6]	.....	.....	.....	.....	W. T. Helmuth, M.D. W. Harvey King, M.D.
17. New York Medical College and Hospital for Women.	1861	1861	M. B. Brown, M.D., 135 W. 34th St., New York, N. Y.	26 weeks. Oct. 1st.	4	23	4	311	21	21	Assistants, 13.	450,000-500,000	110,000	100,000	Varies.	H. M. Dearborn, M.D. W. H. King, M.D.
18. Cleveland Univ. of Med. and Surg., merged in	1849	1849														
19. Cleveland Homœopathic Medical College.[7]	1849	1849	W. A. Phillips, M.D., 89 Euclid Av., Cleveland, O.	26 weeks. September.	4	186	62	1,928	48	28	20	100,000	None.	... ...	.....	W. A. Phillips, M.D. J. C. Wood, M.D.
20. Pulte Medical College.....	1872	1872	J. D. Buck, M.D., Cincinnati O...	27 weeks. September.	4	34	5	593	23	17	6	25,000	None.	3,000	None.	W. A. Geohegan, M.D. C. E. Walton, M.D
21. Hahnemann Medical College, of Philadelphia.	1848	1848	Pemberton Dudley, M.D., 1305 N. 16th St., Philadelphia, Pa.	8 months. Oct. 14th.	4	276	68	2,372								

[1] The Kansas City University, of which we are the Medical Department, has an endowment of over $500,000. [2] Associate professors, 7. [3] Instructors, 10; assistants, 9.
[4] A very successful year. [5] Maintained by the State of Minnesota. No graduates this year. [6] Assistants, 6.
[7] The Cleveland Medical College and the Cleveland University of Medicine and Surgery were united in May, 1897, under name of The Cleveland Homœopathic Medical College.

GRADUATES OF HOMŒOPATHIC MEDICAL COLLEGES. SESSION OF 1897–98.

SOUTHWESTERN HOMŒOPATHIC COLLEGE.

Session, September 28, 1897, to April 4, 1898. Number of weeks, —. Matriculants, 30. Graduates —. Commencement, April 4, 1898.

Name.	Residence.	Age	Preceptor.	Time of Study	Number of Courses Attended, and Where.
				Yrs.	
Coon, Mrs. Geo. S.	Louisville, Ky.	....	Dr. Geo. S. Coon	3	3, Southwestern.
Clokey, Mitchel C.	Columbus, O.	....	Dr. Allison Clokey	3	3, Southwestern.
Hudson, Miss Mary	Boonville, Ind.	....	.....	3	3, Southwestern.
Kriskel, Miss Laura	Louisville, Ky.	....	.....	3	3, Southwestern.
Miller, Miss J. L.[1]	Louisville, Ky.	....	Louisville City Hospital.	3	3, Southwestern.
Maddox, J. Herbert, Jr.	Shelbyville, Ky.	....	.....	3	3, Southwestern.
Medra, Miss Florence	Louisville, Ky.	....	.....	3	3, Southwestern.
McCaffery, J. D.	Pittsburg, Pa.	....	.....	3	3, Southwestern.
Neft, P. Alvin, Jr.	Louisville, Ky.	....	Dr. Adam Quinn	4	4, Southwestern.
Peck, F. E.	Midway, Ky.	....	Dr. H. C. Russelman	3	3, Southwestern.
Stanley, E. M.	Louisville, Ky.	....	Dr. Geo. S. Coon	3	3, Southwestern.
Smith, A. C.	Henderson, Ky.	....	Dr. H. C. Griffiths.	3	3, Southwestern.
Milton, Ellis H., M.D.	Bohan, Ky.	....	Med. Dept. Univ. of Louisville.	3	2 yrs. Med. Dept. Univ. of Louisville, and 1 post-grad. term at Southwestern.

[1] Graduate nurse, City Hospital.

HAHNEMANN MEDICAL COLLEGE AND HOSPITAL.

Session, September 14, 1897, to March 24, 1898. Number of weeks, 28. Matriculants, 172. Graduates, 28. Commencement, March 24, 1898.

Alexander, Walter S.	Fond du Lac, Wis.	24	Dr. E. E. Atkins	4	4 yrs. Hahn., Chicago.
Baer, Elizabeth M.	Philadelphia, Pa.	30	Dr. J. S. Mitchell	4	3½ yrs. Woman's Med. Coll., Phila.; 1 yr. Hahn., Chicago.
Brown, F. R. S.	Ocala, Fla.	27	Dr. E. S. Brown	4	4 yrs. Hahn., Chicago.
Brown, Flora Agnes	Portland, Ore.	43	Faculty	4	4 yrs. Hahn., Chicago.
Burtwettz, Irving E.	Morris, Mich.	29	Faculty	4	4 yrs. Hahn., Chicago.
Clark, Stanley A.	Gallen, Mich.	21	Valparaiso Institute	4	1 yr. Valparaiso; 3 yrs. Hahn., Chicago.
Cole, Sarah A., M.D.	Port Austin, Mich.	41	Iowa S. University	4	3 yrs. Ia. S. Univ. Med. Dept.; 1 yr. Hahn., Chicago.
Cook, William Mason	Chicago, Ill.	29	Faculty	4	4 yrs. Hahn., Chicago.
Ellis, Kate Walton	Chicago, Ill.	23	Dr. W. P. MacCracken.	4	4 yrs. Hahn., Chicago.
Evans, David J.	Chicago, Ill	28	Dr. R. L. Snow	4	1 yr. Ill. Coll. Pharm.; 3 yrs. Hahn., Chicago.
Gruble, E. H., B.S.	Chicago, Ill.	22	B.S. and Ph.G., Valparaiso, Ind.	6	3½ yrs. N. I. N. S.; 3 yrs. Hahn., Chicago.
Hunt, Mary Louise	Decatur, Ill.	38	Dr. S. Leavitt	4	4 yrs. Hahn., Chicago.
Lane, Edward H.	Minneapolis, Minn.	24	Faculty	4	4 yrs. Hahn., Chicago.
McGibbon, Walter P.	Cannonsville, N. Y.	25	Princeton Univ.	5	2 yrs. Princeton; 3 yrs. Hahn., Chicago.
Merrill, Lucy L.	Chicago, Ill.	23	Dr. L. M. Owsley	4	4 yrs. Hahn., Chicago.
Miller, Henry C.	Chicago, Ill.	26	B.S. West'n Reserve	5	2 yrs. Western Reserve; 3 yrs. Hahn., Chicago; 2 yrs. B. S. Upper Ill. Univ.
Miller, Lucas A., B.S.	Fayette, Ia.	28	B.S. Upper Ia. Univ.	5	2 yrs. Ia. S. Univ. Med. Dept.; 1 yr. Hahn. Chicago.
O'Leary, Geo. M.	Huntington, Ind.	31	Dr. J. M. Hicks	6	3 yrs. Ont. Vet. Coll.; 3 yrs. Hahn., Chicago.

HAHNEMANN MEDICAL COLLEGE AND HOSPITAL.—CONTINUED.

Name.	Residence.	Age	Preceptor.	Time of Study	Number of Courses Attended, and Where.
				Yrs.	
Perrigo, Fred. A.....	Milwaukee, Wis	23	Dr. E. S. Perrigo...	4	4 yrs. Hahn., Chicago.
Priest, Frank Allen ...	Marion. Ind.....	23	Dr. E. P. Jones, I. Binkridge.	4	4 yrs. Hahn., Chicago.
Randal, John G., B.S..	Beloit, Wis.	24	B.S., Beloit Univ...	5	2 yrs. Beloit Univ.; 3 yrs. Hahn., Chicago.
Royce, Emery E.....	Joliet, Ill.....	25	Dr. T. H. Anderson	4	4 yrs. Hahn., Chicago.
Seems, Gaillard F.....	Mitchellville, Ia....	25	Univ. Iowa	4	3 yrs. Univ. Ia.; 1 yr. Hahn., Chicago.
Simpson, E. E., M.D..	Scotland, S. Dak....	38	N. W. Univ., Chicago.	5	4 yrs. N. W Univ. Med. Dept.; 1 yr. Hahn., Chicago.
Street, Richard H.....	Highland Park, Ill.	24	Dr. J. E. Gilman...	4	4 yrs. Hahn., Chicago.
Theorell, John J.....	Chicago, Ill.....	49	Faculty...	4	4 yrs. Hahn., Chicago.
Watts, Edith Gertrude	Plattsville, Wis.. ..	29	Faculty.....	4	4 yrs. Hahn., Chicago.
Wilson, William Henry	Chicago, Ill.....	30	B. S. Univ. Mich. ..	4	2 yrs. Univ. Mich; 2 yrs. Hahn., Chicago.

HAHNEMANN HOSPITAL COLLEGE OF SAN FRANCISCO.

Session. October 15, 1897, to May 5, 1898. Number of weeks, 28. Matriculants, 18. Graduates, 2 Commencement, May 5, 1898.

Aiken, Ito R.[1]	Oakland, Cal.....	25	Dr. A. A. Cunningham	3	Hahn. Hos. Coll. San Francisco; 2 yrs. Hahn. Hos. Coll. Philadelphia.
Buchanan, Rob't, M.D.	San Francisco, Cal.	35	Hahn. Hosp. Coll. San Francisco.	1	Graduate of Cal. (Eclectic) Med. Coll. San Francisco.

[1] Matriculated prior to four years requirement.

DENVER HOMŒOPATHIC MEDICAL COLLEGE.

Session, October 8, 1897, to April 15, 1898. Number of weeks, 26. Matriculants, 43. Graduates 13. Commencement, —.

Compton, G. W., M.D.	Denver, Col.	32	College.....	4	1 yr. with us; 3 yrs. Amer, Health Coll., Cincinnati.
Cowell, Chas. Branch	Denver, Col.....	31	College.....	4	4 yrs. Denver Hom. Med. Coll.
Ilahi-Baksh, Esther (Anderson.)	Denver, Col.	38	Dr. E. F. A. Drake.	4	1 yr. Omaha Med. Coll.; 1 yr. Col. State Univ.; 1 yr. with us.
Mahon, J. R., M.D....	Denver, Col.	42	College,.....	4	1 yr. Barnes Med Coll.; 2 yrs. Gross Med. Coll.; 1 yr. Denver Hom. Med. Coll.
Mastin, James Wm....	Denver, Col.	42	Dr. S. S. Smythe...	4	4 yrs. Denver Hom. Med. Coll.
Morton, Edward C.....	Denver, Col.....	26	....	4	2 yrs. K. C. Dent. Coll.; 1 yr. Barnes Med. Coll.; 1 yr. with us.
Morton, Harry M.....	Winchester, Va.....	24	.....	4	1 yr. Kansas City Hom. Med. Coll.; 1 yr. Barnes Med. Coll.; 1 yr. with us.
O'Connor, Wilhelmina F.	Denver, Col..	40	College..... ...	4	3 yrs. at Gross Med. Coll.; 1 yr. with us.
Peterson, Anna M.	Manitou, Col.....	31	College.....	4	4 yrs. Denver Hom. Med. Coll.

DENVER HOMŒOPATHIC MEDICAL COLLEGE.—CONTINUED.

Name.	Residence.	Age	Preceptor.	Time of Study	Number of Courses Attended, and Where.
				Yrs.	
Strong, Frederick C...	Denver, Col.	30	College.....	4	2 yrs. Gross Med. Coll.; 2 years Denver Hom. Med. Coll.
Wetlaufer, Ellen J. ..	Cheyenne, Wyo ..	52	College.....	4	4 yrs. Denver Hom. Med. Col.
Wetlaufer, Nelson R...	Cheyenne, Wyo.....	45	College	4	4 yrs. Denver Hom. Med. Coll.
Vinland, Otto S.....	Denver, Col.	29	College.	4	4 yrs. Denver Hom. Med. Coll.

CHICAGO HOMŒOPATHIC MEDICAL COLLEGE.

Session, September 14, 1897, to March 22, 1898. Number of weeks, 26. Matriculants, 137. Graduates, 30. Commencement, March 22, 1898.

Anderson, W. J.	Chicago, Ill.	21	Dr. J. H. S. Johnson	4	2, Nat. Med. Coll. Chicago; 1, C. H. M. C.
Barnhizer, J. G.	Sigourney, Ia.....	23	Dr. F. A. Strawbridge.	4	1, Hom. Dept Univ. Ia.; 3, C. H. M. C.
Boynton, W. E.....	Manchester, Ia.	25	Dr. W. A. Dittmer .	5	3, C. H. M. C.; 2, Univ. Mich. Hom. Dept.
Brown, C. F.....	Kalamazoo, Mich...	22	Dr. E. A. Balyeat...	5	2, C. H. M. C.; 2, Hahn. Med. Coll., Chicago.
Burke, G. H.	Wabash, Ind.	34	Dr. W. F. Stewart..	4	1, C. H. M. C.
Crum, J. A., B.S.....	Sycamore, Ill.....	25	Dr. J. D. Crum.....	5	3, C. H. M. C.
Greer, C. E., M.S.	Oxford, O.....	23	Dr. C. O. Munns ...	4	3, C. H. M. C.
Guilinger, L. M., B.S.D.	Kilgore, Pa..... ...	28	Dr. C. M. Wilson...	4	2, Hahn. Med. Coll, Chicago; 1, C. H. M. C.
Hartman, A....	Alexandria Bay, N. Y.	28	Dr. L. E, July.....	4	2, Hahn. Med. Coll., Chicago; 1, C. H. M. C.
Kendrick, C. N., A.B..	St. Louis, Mo.	24	Dr. G. O. Sutherland.	4	2, Hom. Med. Coll., Mo.; 1, C. H. M. C.
Kennan, A. L., A.M...	Rollo, Ill.....	33	Dr. J. R. Kippax...	4	2, Hahn. Med. Coll. Chicago; 1, C. H. M. C.
Kern. C. B., B.S.. ...	Frankfort, Ind.	25	Dr. E. D. Bergen...	4	3, C. H. M. C.
Larkin. E. F., B.S. ...	Crawfordsville, Ind.	24	Dr. J. H. Taylor....	4	3, C. H. M. C.
Low. E. G.....	Marengo, Mich. ...	36	Drs. Munson and Low.	4	2, Hahn. Med. Coll., Chicago; 1, C. H. M. C.
Loy, E. N.	Piqua, O...	25	Dr. J. C. Fahnestock.	4	2, Pulte Med. Coll.; 1, C. H. M. C.
Miser, G. W.....	Mt. Vernon, O.. ...	24	Dr. E. A. Darley ...	5	4, C. H. M. C.
Molkup, F. O.....	Chicago, Ill	29	Dr. J. Habernicht..	4	1, Hahn. Med. Coll., Chicago; 1, Harvey Med. Coll., Chicago; 2, C. H. M. C.
Morgan, F. B.	Belvidere, Ill.... ..	23	Dr. F. S. Whitman.	4	3, C. H. M. C.
Nadig, H. H., Jr.....	Allentown, Pa.....	22	Dr. W. Z. Twitchell.	6	3, Hahn. Med. Coll, Phila.; 1, C. H. M. C.
Ogle, A. A., Jr.....	Indianapolis, Ind...	30	Dr. J. D. Georgo...	4	1, Ind. Med. Coll.; 2, C. H. M. C.
Pattern, C. J.	Montreal, Canada ..	40	Dr. H. M. Patton...	7	2, Bishop Coll. Med. Dept., Montreal; 2, C. H. M. C.
Rowlands, O. L.	Lowell, Mass.....	29	Dr. G. A. Jett.....	4	3, C. H. M. C.
Short, W. B. B.L. . . .	Dodgeville, Wis.....	29	Dr. H. V. Bancroft	4	3, C. H. M. C.
Spencer, C. H...	Delaware, O.....	23	Dr. E. P. Thomas ..	5	4, C. H. M. C.
Wescott, L. L.	Chicago, Ill.....	33	Dr. A. W. Hinman.	4	4, C. H. M. C.
West, C. E, ...	Austin, Ill.....	25	Dr. F. M. Marsteller	5	4, C. H. M. C.
West, C. H., B.S., Ph.G., D.V.M.	Marion, S. D.	27	Dr. A. W. Hyde....	6	2, Am. Vet. and S. D. Coll., Phila; 1, Med. Dept. Univ. Ia.; 1, C. H. M. C.
White, H. A., B.S. ...	Chicago, Ill.....	28	Dr. W. S. White....	5	3, C. H. M. C.
Whitney, W. C., Ph.B.	South Kirtland, O. .	24	Dr. J. B. Hunt.....	5	3, C. H. M. C.
Wood, G. B., B.S.....	Dubuque, Ia.....	26	Dr. E. R. Jackson..	4	2, Hom. Dept. Univ. Ia.; 1, C. H. M. C.

HERING MEDICAL COLLEGE AND HOSPITAL OF CHICAGO, ILL.

Session, September 13, 1897, to April 8, 1898. Number of weeks, 30. Matriculants, 56. Graduates, 13. Commencement, April 8, 1898.

Name.	Residence.	Age	Preceptor.	Time of Study	Number of Courses Attended and Where.
				Yrs.	
Anderson, James C....	Blue Island, Ill....	27	Dr. O. F. Pierce, Chicago, Ill. ...	4	2, Nat., Chicago; 1, Hering.
Alliaume, C. E., M.D....	Chicago, Ill.	25	.....	..	.....
Barstow, Charles F....	Irving Park, Ill.....	41	Dr. W. J. Hawkes, Chicago, Ill..	4	1, Lewiston Med.; 2, Hering.
Brown, May Thornton.	Chicago, Ill...	44	Dr. A. C. Halphide, Chicago, Ill..	4	1, Hahn., Chicago; 3, Hering.
Felt, Sarah Amanda[1]..	Chicago, Ill...	26	Dr. J. J. Thompson, Chicago, Ill.	4	2, Nat., Chicago; 1, Hering.
Keese, John Mumford.	Cortland, N. Y.	25	Dr. E. B. Nash, Cortland, N. Y. ..	4	3, Hering.
Lane, Frances M.	Chicago, Ill.....	24	Dr. H. W. Pierson, Chicago, Ill..	4	Woman's Med., Chicago (partial); 3, Hering.
Maxson, Mary V. A....	Hermosa, S. Dak. ..	34	Dr. G. P. Stannard, Rapids City, S. D.	4	2, Nat., Chicago; 1, Hering.
McColl, John....	Ontario, Canada....	33	Dr. C. St. Thomas, Ontario, Can. ...	4	2, Nat., Chicago; 1, Hering.
Reynolds, M. S., M.D..	Chicago, Ill..... ..	27	Univ. of Mich.....	4	Univ. Mich., 3 yrs.
Thompson, George M..	Rochester, N. Y ...	26	Dr. J. A. Biegler, Rochester, N. Y..	5	1, Hering (F—); 2, Dunham, Chicago (Soph. and Jr.). 1, Hering (Sr.).
Veatch, John Henry...	Illinois.	32	Dr. W. E. Fruitt, Chicago, Ill....	4	2, Nat., Chicago; 1, Hering.
Wickens, A. E., A.B...	Ontario, Canada....	25	Dr. H. C. Allen, Chicago, Ill....	4	2, Toronto Med. Coll.; 2, Hering.

[1] Nurse.

NATIONAL MEDICAL COLLEGE OF CHICAGO.

Session, September 18, 1897, to March 31, 1898. Number of weeks, 28. Matriculants, 121. Graduates 15. Commencement, March 31, 1898.

Bickerdike, R. J.....	Chicago, Ill.....	....	Faculty.....	4	3, National.
Colby, H. E., A.M....	Chicago, Ill.....	29	Dr. E. C. Sweet ..	6	2, Phys. & Surg., N. Y.; 1, National.
Daley, E. E.....	Minneapolis, Min...	27	Faculty.....	4	2, Physio-Medical, Chicago; 1, National.
Dienst, G. E., B.D....	Japan	....	Dr. W. T. Fruitt...	5	1, Japan; 2, National.
Hughes, W. F., A.B...	Iowa..... . ..	31	Dr. E. R. McIn.yer.	4	2, Cooper Medical College; 1, National.
Leigh, L. K	Chicago, Ill.....	....	Faculty.	5	4, National.
Lockie, G. D.....	U. S. Army	....	Dr. D. Duncan.....	4	3, National.
McConnell, C. P.	Wisconsin.....	25	Dr. T. C. Duncan..	6	4, Osteopathic, Kirksville, Me.; 3, National.
Metcalf, M. E.	Michigan	45	Dr. T. C. Duncan..	6	1, Ann Arbor, Mich.; 2, Hahneman, Chicago; 2, National.
Mikelasek, J. F., Ph.G..	Chicago, Ill.....	26	Dr. E. C. Sweet....	4	1, Bennett, Chicago; 1, Harvey, Chicago; 2, National.
Platt, B. M.....	Chicago, Ill...	26	Faculty.....	5	2, Med. Missionary Institute; 2, National.
Rennison, A. G.....	Chicago, Ill.... ..	28	Dr. G. G. Wellington	4	2, Med. Mission; 2, National.
Spiron, P. D..	Roumania.....	32	Dr. J. K. Moradian.	11	3, University Roumania; 1, National.
Tyson, G. F. M.... ...	Chicago, Ill.....	26	Faculty.....	4	4, Junior, Chicago; 1, Harvard; 1, Nat.
Verneren, C., B.S., M.D.	Chicago, Ill.....	33	Dr. L. D. Rogers...	10	3, Medical Dept. Univ., De Louvain; 1, Nat.

HOMŒOPATHIC MEDICAL DEPARTMENT, STATE UNIVERSITY OF IOWA.[1]

Session, October 14, 1897, to March 29, 1898. Number of weeks, 26. Matriculants, 65. Graduates 8. Commencement, March 29, 1898.

Name.	Residence.	Age	Preceptor.	Time of Study	Number of Courses Attended, and Where.
				Yrs.	
Bailey, Ida Holdson...	Clinton, Ia.....	35	Dr. J.G. Gilchrist..	4	4, Hom. Med. Dept., S. U., Ia.
Coleman, Jennie.....	Des Moines, Ia.....	25	Dr. George Royal...	4	3, Drake Med. Coll., Des Moines, Ia.; 1, Hom. Med. Dept., S. U., Ia.
Farnum, Earl P.....	Mason City, Ia.....	22	Dr. A. T. Huxley..	4	3, Hom. Med. Dept., S. U., Ia.
Kauffman, Wm. A....	Union, Ia.....	23	Dr. F. A. Kauffman	4	3, Hom. Med. Dept., S. U., Ia.
Lambert, Elmer J.....	Ottumwa, Ia.	22	Dr. J. C. Benham.	4	3, Hom. Med. Dept., S. U., Ia.
Sarchet, Lloyd H.....	Wesley, Ia.....	22	Dr. F. L. Tribon....	4	3, Hom. Med. Dept., S. U., Ia.
Skinner, Fred. C.....	Port Byron, Ill.....	25	Dr. F. D. Paul.....	4	3, Hom. Med. Dept., S. U., Ia.
Todd, Victor C.....	Pleasant Plains, Ia..	23	Dr. S. N. McClean..	4	3, Hom. Med. Dept., S. U., Ia.

[1] This is the last class to graduate under the old three-years' plan.

KANSAS CITY HOMŒOPATHIC MEDICAL COLLEGE.

Session, September 15, 1897, to March 24, 1898. Number of weeks, 28. Matriculants, 43. Graduates, 14. Commencement, March 24, 1898.

Browne, Herbert A....	Kansas City, Mo...	21	Dr. W. D. Foster...	4	All in K. C. Hom. Med. Coll.
Cowles, J. V...	Argentine, Kans....	22	Dr. Geo. C. Hope...	4	All in K. C. Hom. Med. Coll.
Nolan, Josephine.....	Hastings, Neb.....	24	Dr. M. A. Howard.	5	All in K. C. Hom. Med Coll.
Grant, H. M.....	Pleasant Hill, Mo...	23	Dr. G. A. Grant....	4½	All in K. C. Mom. Med. Coll.
Goldman, D, N.....	Washington, Kans..	35	Dr. H. P. Gillstrap..	4	All in K. C. Hom. Med. Coll.
Humphrey, J. B.....	Salina, Kans.....	28	Dr. W.T.Armstrong	4	All in K. C. Hom. Med. Coll.
Ditzler, R. V.[1]	Kansas City, Mo....	33	K. C. Hom. Med.. .	5	All in K. C. Hom. Med. Coll.
Van Fossen, L. B.[2]....	Kansas City, Mo....	45	K. C. Hom. Med....	5	All in K. C. Hom. Med. Coll.
Melchers, F. W.[3].....	Eudora, Kans.....	53	....	.....	3 years in K. C. Hom. Med. Coll.
Clothier, Mary E.....	Vera, Kans....	27	K. C. Hom. Med....	4	3 years in K. C. Hom. Med. Coll.
Goodsell, Aletta.....	Altavista, Kans.....	33	Dr. Sam'l Goodsell..	4	2 years at Southwestern; 1 at K. C. Hom. Med.
Howell, E. P..	Deer Creek, Ill.....	42	....	4	2 years at Southwestern: 1 at K. C. Hom. Med.
Blair, Wm. M.	Wilsey, Kans.....	25	.....	4	2 years at Southwestern; 1 at K. C. Hom. Med.
Martin, John F.....	Ohio P. O., Mo.....	31	.....	4	2 years Mo. State Univ. 2 at K. C. Hom. Med.

[1] Graduated nurse. [2] Licensed to practice in Kansas. [3] Graduated in Old School in Germany.

COLLEGE OF HOMŒOPATHIC MEDICINE AND SURGERY OF THE KANSAS CITY UNIVERSITY.

No graduates in 1898.

SOUTHERN HOMŒOPATHIC MEDICAL COLLEGE, BALTIMORE, MD.

Session, October 5, 1897, to April 9, 1898. Number of weeks, 24. Matriculants, 35. Graduates, 7. Commencement, April 14, 1898.

Name.	Residence.	Age	Preceptor.	Time of Study	Number of Courses Attended, and Where.
				Yrs.	
Arringdale, Annie M..	Virginia	33	Dr. C. B. Brewster..	4	4, S. H. M. Coll.
Burritt, Martha C.....	Washington, D. C..	34	Howard Med. Coll..	4	2, Howard; 2, S. H. M. Coll.
Plumb, Amy E.....	Maryland.....	24	Prof. O. E. Janney.	4	3, Woman's Med. Coll., Baltimore; 1, S. H. M. Coll.
Seiple, Arthur W. H...	Pennsylvania	28	Dr. S. C. Moyer	4	3, Hahn., Philadelphia; 1, S. H M. Coll.
Smith, Annie M.....	Pennsylvania.....	32	Dr. D. C. Smith....	11	1, Woman's Med. Coll., Philadelphia; 1, P. G. Med. School, N. Y.; 1, Nat. Hom. Coll., Chicago; 1, S. H. M. Coll.
Wessels, Asa L.....	Maryland	22	Dr. M. G. Smith ...	4	4. S. H. M. Coll.
Willey, W. T.	West Virginia	22	Prof. J. S. Barnard.		2. W. Va. Univ; 1, Baltimore Med. Coll.; 1, S. H. M. Coll.

BOSTON UNIVERSITY SCHOOL OF MEDICINE.

Session, October 14, 1897, to June 1, 1898. Number of weeks, 30. Matriculants, 195. Graduates, 46 M.D. and 8 Ch.B. Commencement, June 1, 1898.

Name.	Residence.	Age	Preceptor	Time of Study	Number of Courses Attended and Where.
				Yrs.	
Basset, Alice Haley....	Newton	29	Under direction of the Boston University School of Medicine.	4	4 yrs. in Boston Univer. School of Med,
Brennan, John Chas...	Brighton.	24		5	5 " " "
Butler, D. Fresbury, jr.	Boston.....	24		4	4 " " "
Briggs, Emily Frances.	Voluntown, Conn...	23		4	4 " " "
Colby, William Morrill.	Wakefield.....	28		5	5 " " "
Coer, Francis Xavier..	Boston.	32		4	4 " " "
Couch, Oscar Roberts.	Pittsfield.	25		4	4 " " "
Davis, Anna B., Ch.B	Boston.....	30		4	4 " " "
Davis, Frank Albert, B.S., M.B.....	Boston.....	31		4	4 " " "
Delivan, Eliz. H., M.D.	Round Lake, N. Y..	55		4	4 " " "
Diemar, Lena Hess ..	Boston.....	38		4	4 " " "
Doolittle, M. A., A.B..	Boston.....	25		3	1 " in N. Y. Col. and Hosp. for Wom.
Gibbs, Susan B. Harris.	Boston.....	43		4	3 " in Boston Univer. School of Med.
Goddard, Abbie Elma.	Lawrence.....	31		4	4 " " "
Green, Julia M., B.S..	Washington, D. C..	27		3	4 " " "
Griffith, Thos. Rich...	Erie, Pa.....	32		4	3 yrs. in Boston University School of Medicine. Graduated in Science.
Hall. Chas. F. Adams.	St. Johnsbury, Vt..	24		4	3 yrs. in Boston Univer. School of Med.
Hodsdon, Walter G....	Centre Ossipee, N.H.	26		6	4 " " "
Hoffses, Granville E...	Damariscotta, Me...	25		5	6 " " "
Howard, Chas. T., A.B.	Hingham..... ...	26		3	5 " " "
Jones, Everett, M.B...	Corinna, Me.....	29		4	3 yrs. in B. U. S. M. Grad. from Harv.
Lee, Wesley T., Ch.B..	Charlestown	26		4	4 yrs. in Boston Univer. School of Med.
Loring, Benjamin T...	Holyoke	29		4	4 " " "
Mahoney, John Lewis.	Spencer's Isl., N. S.	25		4	4 " " "
Marden, W. L., M.B...	Lynn.....	22		4	2 yrs. in B. U. S. M. 2 yrs. in Col. of Phys. and Surgeons, Boston.
Mason, Gilbert McC...	Clinton	27		4	4 yrs. in Boston Univer. School of Med.
McGown, P. T., A.B..	Amherst, N. H.....	24		3	4 " " "
McClintock, Thos. H..	Campello	22		4	3 yrs. in B. U. S. M. Graduate of Brown University.
Neale, Lillian Belle....	Dorchester.....	29		4	3 yrs. in B. U. S. M. N. Y. Col. and Hosp. for women (1 year.)
Newman, Elizabeth B.	Canandaigua, N. Y.	27		4	3 yrs. in Boston Univer. School of Med.
Newton, Carrie E.....	Fayville..	22		4	4 yrs. in B. U. S. M. Graduate of Colby University.

BOSTON UNIVERSITY SCHOOL OF MEDICINE.—CONTINUED.

Name.	Residence.	Age	Preceptor	Time of Study	Number of Courses Attended, and Where.
				Yrs.	
Osgood, H. W., A.B..	Ellsworth, Me.....	27	Under direction of the Boston Univ. Sch. of Med.	3	3 yrs. in Boston Univer. School of Med.
Harper, Ralph Walter.	Reading.....	21		4	4 " " "
Perkins, Thomas L...	W. Durham, Me ...	24		3	3 yrs. in B. U. S. M. 2 yrs. in Mass. Inst. Technology.
Phillips, Nilson Frank.	E. Wilton, Me.....	25		4	4 yrs. in Boston Univer. School of Med.
Pinmer, Herbert Hall..	Thomaston, Me.....	23		4	4 " " "
Sanford, M. McPhee...	W. Somerville.....	30		4	4 " " "
Schubmehl, Frank E..	Dansville, N. Y.....	32		4	4 " " "
Slagle, Sarah E., Ch.B.	Wissahickon, Pa....	39		4	4 " " "
Smith, Joseph Arthur.	Athol....	22		4	4 " " "
Starkweather, M. A...	Providence, R. I....	33		4	4 " " "
Stone, Arthur L.....	Waltham.....	24		4	4 " " "
Streeter, Howard A....	Worcester.....	22		4	4 " " "
Sluks, Rufus William..	Greenland, N. H...	27		6	6 " " "
Willis, John Embert ..	E. Bridgewater.....	23		4	4 " " "
Winslow, Richard E...	Norwood.....	25		5	5 " " "
[1]Received the degree of Ch.B.					
Bridge, Emma Frances.	Boston.....	31			
Bush, Charles William.	Lancaster, O.....	27			
Jordan, Ernest Major..	Cape Elizabeth, Me.	26			
Lambert, John H....	Lowell.....	22			
Perkins, Alfred R. ...	Baldwinsville.....	20			
Rockwell, Alfred E. P.	Norwich, Conn.....	28			
Rockwell, John A., Jr.	Norwich, Conn.....	26			
Smith, Conrad.....	Boston..... ...	24			

HOMŒOPATHIC MEDICAL COLLEGE OF THE UNIVERSITY OF MICHIGAN.

Session, October 1, 1897, to June 30, 1898. Number of weeks, 36. Matriculants, 64. Graduates, 9. Commencement, June 30, 1898.

Name.	Residence.	Number of Courses Attended, and Where.
Babcock, John Newton. ..	Bay City Mich	4, Univ. of Mich.
Ball, Joseph Harris	Ann Arbor, Mich.....	4, Univ. of Penn.
Clifford, Raymond Alfred..	Wadsworth, O.....	2, Clev. Univ.; 2, Univ. of Mich.
Maynard, Ernest Bigelow.	South Berlin, Mass.....	2, Clev. Univ.; 2, Univ. of Mich.
Montague, Chas. Augustus	Buchanan, Mich.	4, Univ. of Mich.
Robethge, Dr. Charles A...	Boston, Mass	Graduate of Jeff. Med. Coll., Phil.; 2, Univ. Mich.
Schimansky, Clarence A...	Sandusky, O	4, Univ. of Mich.
Tuttle, Samuel Porter.....	St. Louis, Mich.....	4, Univ. of Mich.
Wells, Miss Marion... ...	Garbutt, N. Y	4, Univ. of Mich.

HOMŒOPATHIC MEDICAL COLLEGE OF MISSOURI.

Session, October 1, 1897, to April 7, 1898. Number of weeks, 24. Matriculants, —. Graduates, 21. Commencement, April 7, 1898.

Name.	Residence.	Age	Preceptor.	Time of Study	Number of Courses Attended, and Where.
				Yrs.	
Peek, Wm. A..... ..	Mars Hill, N. C.....	28	Dr. E. D. Peek. ...	4	Hom. Med. Coll. Mo.
Perry, Wm. A.....	Love Lake, Mo.	29	Dr. A. T. Noe	4	" " " "
Sammens, Stewart A..	Blair, Neb.....	28	Hom. Med. Coll.....	4	" " " "
Worthen, Jesse M.	Warsaw, Ill.	24	Hom. Med. Coll.....	4	" " " "
Easton, J. M.....	Dewagiac, Mich....	37	W. W. Easton	4	" " " "

HOMŒOPATHIC MEDICAL COLLEGE OF MISSOURI.—CONTINUED.

Name.	Residence.	Age	Preceptor.	Time of Study	Number of Courses Attended, and Where.
				Yrs.	
Merrill, M. M.....	Fort Davis, Tex....	35	Dr. J. Scott	4	Hom. Med. Coll. Mo.
Reynolds, Theron S. ..	Diamondale, Mich..	30	Hom. Med. Col., Mo.	4	" " " "
Bunte, Louis E.....	Ellinwood, Kan.....	23	Dr. George Mellies..	4	" " " "
Stevenson, Benj. J....	Sparta, Ill.	24	Dr. S. O. Boynton..	4	" " " "
Schoen, Wm. A.	Pocahontas, Mo....	22	Dr. R. Schoen.....	4	" " " "
Baird, Jas. M.....	Eureka, Ind.	25	Hom. Med. Col., Mo.	4	" " " "
Lueders, Albert.....	Wittenburg, Mo. ...	21	Dr. R. Schoen.....	4	" " " "
Klasterman, Lewis....	Okawville, Ill.....	22	Dr. J. Klasterman .	4	" " " "
Gilbert, W. W.....	Conway Spgs., Kan.	24	Dr. D. M. Gibson...	4	" " " "
Cauthorn, W. H.....	Mexico, Mo.....	21	Dr. W. E. Reilly...	4	" " " "
Reilly, J. A.	Auxvasse, Mo.	22	Dr. W. E. Reilly....	4	" " " "
Russell, Harry W.. ..	Centralia, Ill.	21	Hom. Med. Col., Mo.	4	" " " "
Francis, Elizabeth.....	St. Louis, Mo.....	30	Dr. L. C. McElwee..	4	" " " "
McPherson, Sam'l P...	Bocard, Mo...	29	Hom. Med. Col., Mo.	4	" " " "
L. R. Stablein	Kirksville, Mo.....	33	Dr. A. T. Noe.....	4	" " " "
B. L. Fowler....	Chetopa, Kans....	24	Hom. Med. Col., Mo.	4	" " " "

NEW YORK HOMŒOPATHIC MEDICAL COLLEGE AND HOSPITAL.

Session, October 5, 1897, to May 5, 1898. Number of weeks, 30. Matriculants, 132. Graduates, 24. Commencement, May 5, 1898.

Chamberlain, Geo. W..	Syracuse, N. Y.....	30	Dr. Geo. Dowkoutt.	4	N. Y. Hom. Med. C. & H.
Clark, Charles C..	63 Central Av., Newark, N. J.	28	Dr. Chas. W. Clark..	4	" " " "
Cochrane, Harold D...	Silver Bay, Warren County, N. Y.	22	Dr. Geo. Dowkoutt..	4	" " " "
Davies, Thomas F.....	——, N. Y. City..	21	Dr. H'y von Musits.	4	" " " "
Decker, James W.....	Scranton, Pa.	23	Dr. J. W. Coolidge .	3	" " " "
Gates, James M.....	Springfield, Mass. ..	22	Dr. Luke Corcoran .	4	" " " "
Gayde, E. Appleton ...	Utica, N. Y.... ...	30	Dr. M.A. MacMaster	4	" " " "
Goodrich, Fred. W....	507 W. 152d St., N. Y. City..... ..	22	Dr. S. W. Goodrich.	4	" " " "
Hutchinson, John.....	South Manchester, Conn	38	Dr. P. Brown, Jr...	4	1, Univ. Vt, Med. Dep.; 1, Preceptor; 2, N, Y. Hom. Med. Coll. & H.
Irwin, Frederick C....	Waterville, N. Y ..	24	Dr. Dean, Jr.....	4	N. Y. Hom. Med. C. & H.
Lerrigo, Peter H. J...	636½ Grand Av., Los Angeles, Cal.	22	Dr. G. D. Dowkoutt.	4	1, Top. Hom. Prep. Sch. Med.; 3, N. Y. Hom. Med Coll. & Hosp.
Meeker, Irving A.	Glen Ridge, N. J...	24	Dr. J. E. Wilson....	4	N. Y. Hom. Med. C. & H.
Pallister, Stanley W...	Pultneyville, N. Y..	22	Dr. F. W. Clark....	4	" " " "
Reed, Mark E..... ...	Buffalo, N. Y.	24	Dr. B. J. Maycock..	4	1, Buff. Univ.; 3, N. Y. Hom. Med. Coll. & H.
Riordan, Patrick D ...	85 Nassau St., N. Y. City.	36	Dr. Wm. A. Stewart	4	N. Y. Hom. Med. C. & H.
Roe, Dr. Samuel A...	Butler, Mo.....	21	.....	4	3, Mo. Univ. Med. Coll.; 1, N. Y. Hom. Med. Coll. & Hosp.
Rodgers, Dr. Albert H.	76 Livingston Av., Albany, N. Y.	30	Dr. E. G. Cox.....	4	3, Albany Med. Coll. & Hosp.; 1, N. Y. Hom. Med. Coll. & Hosp.
Seward, Federick W...	Goshen, N. Y.....	23	Dr. F. W. Seward ..	4	N. Y. Hom. Med. C. & H.
Shepard, Hiland G....	517 Monroe Av., Rochester, N. Y.	26	Dr. C. R. Sumner.	4	" " " "
Spencer, Hazleton. ..	——, N. Y. City...	29	Dr. S. L. Nash	4	" " " "
Thompson, Arthur F..	62 So. 10th St., Newark, N. J.	23	Dr. Edward Everitt.	4	" " " "
Walker, Lester E.....	Norwich, Conn.	26	Dr. C. L. Stark.....	4	" " " "
Whitehorne, Dr. Frederick N.	64 W. 126th St., N. Y. City.	26	Dr. W. I. Pierce...	4	3, Phys. & Surg., N. Y. City; 1, N. Y. Hom. Med. Coll. & Hosp.
Whitmyre, John P....	Schenectady, N. Y.	27	Dr. L. Faust	4	N. Y. Hom. Med. C. & H.

NEW YORK MEDICAL COLLEGE AND HOSPITAL FOR WOMEN.

Session, September 28, 1897, to April 11, 1898. Number of weeks, 26. Matriculants, 23. Graduates, 4. Commencement, May 3, 1898.

Name.	Residence.	Age	Time of Study	Number of Courses Attended, and Where.
			Yrs.	
Gillette, Elizabeth	Granby, Conn	23	4	4, N. Y. Med. Coll. & Hosp. for Women.
Langworthy, Anne L	Alford, N. Y	28	4	" " " " " " "
Mayer, Henriette	New York City	23	4	" " " " " " "
Nottage, Rachel	Brooklyn, N. Y	33	4	" " " " " " "

CLEVELAND HOMŒOPATHIC MEDICAL COLLEGE.[1]

Session, October 6, 1897, to April 6, 1898. Number of weeks, 26. Matriculants, 186. Graduates, 68. Commencement, April 6, 1898.

Name.	Residence.	Age	Preceptor.	Time of Study	Number of Courses Attended, and Where.
				Yrs.	
Abels, Charles W	Paterson, N. J	25	Dr. T. Y. Kinne	4	2, C. U. M. S.; 1, Clev. Hom. Med. Coll.
Anderson, Claude C	Pittsburg, Pa	27	Dr. Griffin Reno	4	2, C. Med. Coll.; 1, Clev. Hom. Med. Coll.
Basquin, Fred. S	Chardon, O	24	Dr. A. B. Allyn	4	2, C. Med. Coll.; 1, Clev. Hom. Med. Coll.
Bevington, Harry G	Ashtabula, O	21	Dr. J. H. Pardee	4	2, C. Med. Coll.; 1, Clev. Hom. Med. Coll.
Carey, Albert	Bedford, O	26	Dr A. W. Walters	4	2, C. Med. Coll.; 1, Clev. Hom. Med. Coll.
Crecelius, Wm. A	Milan, O	30	Dr. K. B. Waite	4	2, C. U. M. S.; 1, Clev. Hom. Med. Coll.
Clendon, Clara K	Cleveland, O	29	Dr. Kate Parsons	4	2, C. U. M. S.; 1, Clev. Hom. Med. Coll.
Cross, John S	Moravia, Pa.,	24	Dr. W. T. Whan	4	2, C. M. C.; 1, Clev. Hom. Med. Coll.
Davis, Herbert L	Cleveland, O	25	Dr. K. B. Waite	4	2, C. U. M. S.; 1, Clev. Hom. Med. Coll.
Dickerson, Jessie C	Steubenville, O	22	Dr. C. I. Mottley	4	2, C. M. C.; 1, Clev. Hom. Med. Coll.
Erskine, James H	Cleveland, O	37	Dr. H. M. Page	4	2, C. U. M. S.; 1, Clev. Hom. Med. Coll.
Ewing, Homer H	McCleary, Pa	27	Dr. J. C. McCauley	4	2, C. M. C.; 1, Clev. Hom. Med. Coll.
Griffis, Arthur A	Cleveland, O	36	Dr. M. D. Satterlee	4	2, C. M. C.; 1, Clev. Hom. Med. Coll.
Gurley, Eber W	Cleveland, O	22	Dr. Harlan Pomeroy	4	2, C. U. M. S.; 1, Clev. Hom. Med. Coll.
Glendenning, Wm. B	Cleveland, O	21	Dr. H. H. Baxter	4	2, C. M. C.; 1, Clev. Hom. Med. Coll.
Green, Arba S	Johnsonville, O	28	College	4	2, C. M. C.; 1, Clev. Hom. Med. Coll.
Gilbert, Walter J	Dexter, Me	23	Dr. C. M. Foss	4	2, C. U. M. S.; 1, Clev. Hom. Med. Coll.
Gillard, Edwin E	Sandusky, O	24	Dr. Edwin Gillard	4	1, Ann. Arbor.; 2, C. M. C; 1, C. H. M. C.
Hamblin, Ida M	Geneva, O	31	Dr. E. D. Warner	4	2, C. U. M. S.; 1, C. H. M. C.
Haggerty, Hugh A	Fredericktown, O.	23	Dr. W. G. Ely	4	2, C. M. C.; 1, C. H. M. C.
Handmachin, David	Cleveland, O	38	Dr. E. Rowe	4	2, C. U. M. S.; 1, C. H. M. C.
Ireland, Charles L	Columbus, O	25	Dr. M. P. Hunt	4	2, Starling Med. Coll.; 1, C. H. M. C.
Inonye, Tomo	Nagasaki, Japan	28	Dr. Mary A. Suganuma.	4	2, C. U. M. S.; 1, C. H. M. C.

[1] The Cleveland Medical College and the Cleveland University of Medicine and Surgery united in May, 1897, under the charter of the latter, forming the Cleveland Homœopathic Medical College.

CLEVELAND HOMŒOPATHIC MEDICAL COLLEGE.—CONTINUED.

Name.	Residence.	Age	Preceptor.	Time of Study.	Number of Courses Attended, and Where.
				Yrs.	
Johnson, Margaret M..	Port Clinton, O.....	33	Dr. C. C. True.....	4	2, C. M. C.; 1, C. H. M. C.
Johnston, Anna.....	Pittsburgh, Pa. ...	27	Dr. Millie J. Chapman.	4	2, C. M C.: 1, W. R. W.; 1, C. H. M. C.
James, Wm. H.....	Cleveland, O.	23	Dr. C. C. True.....	4	1, C. M. C.; 1. W. R. W.; 1, C. H. M. C.
Jackson, Lindsay A. ..	Columbus, O.....	22	Dr. J. C. Blinn.....	4	2, C. M. C.; 1, C. H. M. C.
Kimmel, Benj. B.....	Yale, O	27	Dr. G. J. Jones. ...	4	2, C. M. C.; 1, C. H. M. C.
La Vigne, Alex. A....	Cleveland, O..... ..	26	Dr. J. G. Colton....	4	2, C. U. M. S.; 1, C. H. M. C.
Lytle, Joseph A..	Deshler, O.....	28	Dr. J. A. Tompson .	4	2, C. M. C.; 1, C. H. M. C.
Livingston, Edwin C..	Starkey, N. Y.... .	35	Dr. J. H. Maloney..	5	2, Hom. Hosp.; 2, C. U. M. S.; 1 C. H. M. C.
Leaming, Jerre H. ...	Hartford. O.....	28	College.....	4	2, C. M. C.; 1, C. H. M. C.
Minahan, Thomas. ...	Pittsburg, Pa.....	35	Dr. W. A. Tims . .	4	2, C. M. C.; 1, C. H. M. C.
Mera Harry P., Jr	Detroit, Mich..	21	Dr. H. P. Mera, Sr .	4	2, C. M. C.; 1, C. H. M. C.
Mellow, John A.....	New Brighton, Pa..	22	Dr. J. C. McCauley	4	2, C. M. C.; 1, C. H. M. C.
Myers, George P.....	Rocky River, O.....	21	Dr. C. C. True. ...	4	2, C. M. C.; 1, C. H. M. C.
Neff, Harry C.....	Findlay, O.	23	Dr. T. G. Barnhill..	4	2, C. M. C.; 1, C. H. M. C
Newcomb, Fred. C....	Middlefield, O.	30	Dr. Dudley Smith ..	4	2, C. U. M. S.; 1, C. H. C. M.
Overholt, Curtis A. ...	Hicksville, O.....	26	Dr. W. H. Lanning.	4	1, C. U. M. S.; 1, C. H. M. C.
Parsons, Willis T.	Akron, O.....	23	Dr. S. P. Ecki.....	4	2, C. M. C.; 1, C. H. M. C
Pierce, Lucy I.....	Erie, Pa.....	23	Dr. E. T. Gifford...	4	2, C. M. C.; 1, C. H. M. C.
Pease, Ralph C.... ...	Chardon, O....	23	Dr. Lucy Hertzog...	4	2, C. U. M. S.; 1, C. H. M. C.
Radcliffe, Geo. C.....	Cleveland, O.....	23	Dr. A. F. Baldinger	4	1, C. U. M. S.; 1, C. M. C.; 1. C. H. M. C.
Ridgway, Mary D.	White Church, N. Y.	24	Dr. Martin Bessemer	4	2, C. M. C.; 1, C. H. M. C.
Rensing, Andrew L....	Cleveland, O.	26	Dr. K. B. White ..	4	2, C. U. M. S.; 1, C. H. M. C.
Smith, Alex. C..	Mingo, Junction, O.	30	Dr. J. W. Covert. .	4	2, C. M. C.; 1, C. H. M. C.
Smith, Willard W.....	LaGrange, Ore.	22	Dr. Dudley Smith ..	4	2, C. U. M. S.; 1, C. H. M. C.
Smith, Lamont B. ...	Willsville, O.	22	Dr. A. L. Robinson.	4	2, C. M. C.; 1, C. H. M. C.
Schild, John G.	Cleveland, O.	24	Dr. W. E. Gill.....	4	3, C. U. M. S.; 1, C. H. M. C.
Small, Standley G.....	Pittsburg, Pa.....	23	Dr. J. R. Anderson.	4	1, West Penn.; 1, C. M. C.; 1, C. H. M. C.
Steiner, Josiah S.....	Cranberry, O.....	25	Dr. H. T. Breckbill.	4	1, Pulte; 1, C. M. C.; 1, C. H. M. C.
Silbernagel, Chas. E...	Columbus, O.	21	Dr. W. B. Carpenter	4	2, Starling Med. Coll.; 1, C. H. M. C.
Shannon, Elmer E....	New Galilee, Pa.....	21	Dr. W. A. Tims ..	4	2, C. M. C.; 1, C. H. M. C.
Schneider, J. H., Jr...	Cleveland, O.	22	Dr. J. Schneider ...	4	2, C. U. M. S.; 1, C. H. M. C.
Shedd, Bert D.....	Arcade, N. Y... ..	25	Dr. B. Sovereign ...	4	2, C. U. M. S.; 1. C. H. M. C.
Turner, Jennie P.....	Pittsburg, Pa.....	29	Dr. C. C. True	4	2, C. M. C.; 1, C. H. M. C.
Van Norman, Wm V.	San Diego, Cal.	22	Dr. E. V. Van Norman.	4	3, C. U. M. S.; 1, C. H. M. C.
Waite, Herbert C.....	Hudson, O...	24	Dr. K. B. Waite....	4	2, C. U. M. S.; 1, C. H. M. C.

CLEVELAND HOMŒOPATHIC MEDICAL COLLEGE.—CONTINUED.

Name.	Residence.	Age	Preceptor.	Time of Study	Number of Courses Attended, and Where.
				Yrs.	
Walters, Wilson H	Chagrin Falls, O.	24	Dr. R. W. Walters	4	2, C. M. C.; 1, C. H. M. C.
Watson, Charles E.	Lima, N. Y.	22	Dr. A. J. McKenzie	4	2, C. U. M. S.; 1, C. H. M. C.
Welsh, Thomas	Pittsburg, Pa.	29	Dr. H. H. Briggs	4	2, C. M. C.; 1, C. H. M. C.
Williams, Albert D.	Chardon, O.	25	Dr. A. B. Allyn	4	2, C. M. C.; 1, C. H. M. C.
White, Mary H	Salem, O.	37	Dr. H. W. Thompson.	4	2, C. M. C.; 1, C. H. M. C.

PULTE MEDICAL COLLEGE.

Session, September 29, 1897, to April 5, 1898. Number of weeks, 27. Matriculants, 34. Graduates 5. Commencement, April 5, 1898.

[1] Bliss, Arthur Stephen	Center Point, Iowa	24	Dr. W. H. Newland.	4	Io. Univ., 1 term, Plt. 3
[1] Goodsell, Jno. Walter	Leechburg, Pa.	25	Pulte College	4	3, Pulte.
[2] Mitchell, Wylie Toune	Portsmouth, O	25	Dr. Jno. R. McClure	4	3, Pulte.
[3] Thomas, Frank Henry	Houstin, O.	35	Dr. C. R. Coffeen	6	3, Pulte.
[2] Wollam, Everett W.	Cincinnati, O.	33	Dr. S. J. D. Meade	4	4, Pulte.

[1] Entered Sophomore year (College Graduate).
[2] Entered Sophomore year, Preliminary Examination.
[3] Entered Sophomore year, Teachers' Certificate.

HAHNEMANN MEDICAL COLLEGE AND HOSPITAL OF PHILADELPHIA.

Session, September 30, 1897, to May 12, 1898. Number of weeks, 33. Matriculants, 276. Graduates 68. Commencement, May 12, 1898.

Adams, Burdett S.	New Haven, Conn.	25	Dr. C. B. Adams	4	4, Hahnemann, Phila.
Allen, Charles Clifford	Bridgeton, N. J	22	Dr. J. G. Streets	4	4, Hahnemann, Phila.
Amsboy, Lewis Brown	Philadelphia, Pa	27	Dr. R. Murdock	5	4, Hahnemann, Phila.
Appel, A. A., Ph.D.	Collegeville, Pa.	27	Dr. Van R. Tindall.	9	Gra. Phil. Coll. Phar.; 4, Jefferson Med. Coll.; 1, Hahnemann, Phila.
Armor, Russell Bigler	Harrisburg, Pa.	23	Dr. E. L. Clark	5	1, Univ. Penna. Biol. Co.; 4, Hahnemann, Phila.
Baker, Wm. F., A.B.[1]	Philadelphia, Pa	22	Dr. J. Allen	4	3, Hahnemann, Phila.
Baker, Walter J.	Camden, N. J.	22	Dr. C. J. Cooper	4½	4, Hahnemann, Phila.
Bates, J. Bonnar	Binghamton, N. Y.	26	Dr. D. H. McGraw	5	4, Hahnemann, Phila.
Blair, Alex. Cham.	Pittsburg, Pa	30	Dr. W. W. Blair	4½	4, Hahnemann, Phila.
Boericke, O. E., A.B.	Philadelphia, Pa.	26	Dr. Wm. Boericke	5	4, Hahnemann, Phila.
Bond, Wm. Thomas	Philadelphia, Pa	26	Dr. G. W. Parker	7	4, Jefferson Med. Coll.; 1, Hahnemann, Phila.
Challinor, S. Boyd[1]	Pittsburg, Pa	26	Dr. J. H. McClelland	4	3, Hahnemann, Phila.
Chamberlin, Wm. T.	Ottawa, Canada	25	Dr. S. Wager	4	4, Hahnemann, Phila.
Chase, Daniel E., Jr.	Somerville, Mass	27	Dr. C. M. Thayer	5½	3, Univ. Sc. Med. Boston; 1, Hahnemann, Phila.
Clement, Edgar	Haddonfield, N. J.	32	Dr. H. T. Hunt	5	4, Hahnemann, Phila.
Clover, Samuel Wm.	Palmyra, N. J.	24	Dr. L. L. Sharp	5	4, Hahnemann, Phila.
Crichton, Macpherson	Washington, D. C.	25	Dr. W. H. Heron	4½	4, Hahnemann, Phila.
Crictchlow, G.R., A.B.[1]	New Brighton, Pa.	25	Dr. J. S. Boyd	5	3, Hahnemann, Phila.
Cutting, Chas. T., Jr.	Philadelphia, Pa	22	Dr. J. Heber Smith.	5	1, Boston Univ. of Med.; 3, Hahnemann, Phila.

[1] Entered Sophomore year on A. B. degree.

HAHNEMANN MEDICAL COLLEGE AND HOSPITAL OF PHILADELPHIA.—CONTINUED.

Name.	Residence.	Age	Preceptor.	Time of Study	Number of Courses Attended, and where.
				Yrs.	
Dake, William Emery..	Rochester, N. Y....	24	Dr. A. B. Carr.....	4	1, Med. Dept. Univ. of Buffalo, N. Y.; 3, Hahnemann, Phila.
Eberhard, Henry M...	Philadelphia, Pa ...	23	Dr. F. P. Wilcox ...	5	4, Hahnemann, Phila.
Fairbank, Stuart J....	Utica, N. Y.....	23	Dr. C. G. Capron...	4½	4, Hahnemann, Phila.
Garrison, Biddle Hiles.	Elmer, N. J.....	21	Dr. H. C. Garrison..	4	4, Hahnemann, Phila.
Gates, William Dunn ..	Sayre, Pa.....	33	Dr. H. D. La Plant.	4	4, Hahnemann, Phila.
Gerhart, J. M., Jr.....	Philadelphia, Pa ...	22	Dr. J. M. Gerhart..	4	4, Hahnemann, Phila.
Gray, J. Rea T., Jr.[1]..	Chester, Pa	28	Dr. D. P. Maddox...	5	3, Hahnemann, Phila.
Greason, C. E., M.E...	Carlisle, Pa	27	Dr. J. G. Fickel....	5	4, Hahnemann, Phila.
Greenwood, Mitchell...	Millville, N. J.....	33	Dr. C. H. Hubbard.	4	4, Hahnemann, Phila.
Haehl, Richard.....	Germany.....	25	Dr. C. V. Vischer...	5	4, Hahnemann, Phila.
Haines, Chas. T.....	Clarksboro, N. J....	26	Dr. C. M. Burk.....	4	4, Hahnemann, Phila.
Harper, Henry Benj...	Philadelphia, Pa ...	57	Dr. D. G. Allcutt. .	5	4, Hahnemann, Phila.
Harry, George Harry..	Bradyaville, Pa.....	24	Dr. E. E. Pownell..	6	4, Hahnemann, Phila.
Hartley, Arthur.....	Palmyra, N. J.....	26	Dr. H. B. Hall.....	4½	1, Uni. of Penna.; 3 Hahnemann, Phila.
Hartman, Geo. Willis..	Littlestown, Pa.....	26	Dr. S. B. Weaver...	4	4, Hahnemann, Phila.
Hedrick, John Krupp..	Perkasie, Pa.....	28	Dr. D. M. Landis...	4	4, Hahnemann, Phila.
Hedrick, Llewellyn E..	Asbury Park, N. J..	23	Dr. J. A. W. Hetrick	4½	4, Hahnemann, Phila.
Hill, John Bruce.....	Philadelphia, Pa...	22	Dr. C. S. Brown...	4½	4, Hahnemann, Phila.
Hollinshead, Theo. H..	Moorestown, N. J..	29	Dr. F. F. Stroud....	5	4, Hahnemann, Phila.
Hood, Jos. Robinson..	Philadelphia, Pa....	24	Dr. W. H. Senderling	4½	4, Hahnemann, Phila.
Houck, Geo. Emory..	Frederick, Md.....	22	Dr. U. A. Sharretts.	4	4, Hahnemann, Phila.
Hubbs, Ellwood Samuel.	Philadelphia, Pa...	23	Dr. W. H. Griffith..	7	4, Medico-Chir. Coll., Phila.; 1, Hahnemann, Phila.
Huber, William Henry.	Glenside, Pa.....	23	Dr. W. M. Hillegas.	4	4, Hahnemann, Phila.
Hughes, François L...	Philadelphia, Pa ...	22	Dr. F. J. Haerer ...	5	4, Hahnemann, Phila.
Knerr, Bayard...	Philadelphia, Pa ...	22	Dr. C. B. Knerr....	5	2, Univ. of Penn. Biol. course; 3, Hahnemann, Phila.
Lanphear, Fred. L....	Boston, Mass.....	24	Dr. C. H. Lanphear.	4	4, Hahnemann, Phila.
Larer, Richard White.	Philadelphia, Pa ...	21	Dr. W. H. Somerville	4	4, Hahnemann, Phila.
Livezey, F. B., A.B.[2]..	Philadelphia, Pa ...	21	Dr. C. H. Smith....	4	3, Hahnemann, Phila.
McWhorter, Thomas Henry, M.D.[3]	Philadelphia, Pa ...	26	Dr. C. Mohr.....	7½	3, Univ. of Penn. Med. Dept; 1, Hahnemann, Phila.
Meily, Harry Seltzer...	Lebanon, Pa.....	42	Dr. W. H. Holsberg.	5	4, Hahnemann, Phila.
Miller, M. L., B.S.[2]....	Philadelphia, Pa...	29	Dr. A. F. Ziegenfuss.	4	3, Hahnemann, Phila.
Muth, Fred. Lucius...	E. Mauch Chunk, Pa	22	Dr. G. S. Kirby	4½	4, Hahnemann, Phila.
Nevinger, Martin J....	Philadelphia, Pa...	21	Dr. C. S. Sturz.....	5	4, Hahdemann, Phila.
Northrop, Edward R..	Seymour, Conn.....	28	Dr. H. L. Northrop.	4	4, Hahnemann, Phila.
Ogden, Geo, Steward..	York, Pa.....	24	Dr. O. C. Brickley..	4½	4, Hahnemann, Phila.
Randal, Edward Gove, A.B.	Poultney, Vt	26	Dr. Sam. Sparhawk.	4	1, Univ. of Vermont; 3, Hahnemann, Phila.
Richards, F. L., A.B.[2].	Oswego, N. Y.....	25	Dr. L. B. Richards.	4	3, Hahnemann, Phila.
Riddel, Herbert Ewing.	Philadelphia, Pa ...	24	Dr. C. E. Myers....	4	4, Hahnemann, Phila.
Robbins, Walter John, M.D.[3]	Philadelphia, Pa...	24	Dr. W. E. Butler...	5	4. Univ. of Penn. Med. Dept.; 1, Hahnemann, Phila.
Roberts, Norman, M.D.[3]	Philadelphia, Pa ...	23	Dr. W. D. Bayley...	5½	4, Univ. of Penn. Med. Dept.; 1, Hahnemann, Phila.
Rogers, Wm. Norwood.	Media, Pa.....	27	Dr. T. Pratt	7	4, Hahnemann, Phila.
Roth, Chas. E., A.B.[2].	Philadelphia, Pa ...	25	Dr. W. F. Roth	4	3, Hahnemann, Phila,
Ruffeel, John Benj....	Philadelphia, Pa...	22	Dr. W. K. Brown...	4	4, Hahnemann, Phila.
Skinner, Merton R.[4]...	Le Roy, N. Y.....	25	Dr. S. W. Skinner..	11	3, Hahnemann, Phila.
Thorne, Nathan... ...	Woodstown, N. J...	24	Dr. E. Janney.....	4	2, Howard Univ., Washington; 2, Hahnemann, Phila.
Truit, Rulliff Lawrence.	Wilmington, Del....	21	Dr. J. H. Rile.....	4½	4, Hahnemann, Phila.
Twitchell, A. B., Jr...	Newark, N. J.....	29	Dr. W. R. Ward....	4	4, Hahnemann, Phila.
Webb, Charles Valores.	Salem, O.....	25	Dr. L. W. Webb...	4	4, Hahnemann, Phila.
Wetzel, Harry S.....	Dayton, O....	29	Dr. F. D. Bittinger.	4½	4, Hahnemann, Phila.

[1] Examined and admitted on advanced standing to Sophomore year.
[2] Entered Sophomore year, on A.B. degree.
[3] Post Graduate.
[4] Entered Sophomore year, on Ph.B. degree.

APPENDIX.

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Supplementary Report of Monument Committee.

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HISTORICAL NOTE.

In July, 1843, the New York Homœopathic Physicians' Society issued invitations to the Homœopathic physicians of the United States, to meet in general convention in the city of New York for the purpose of forming a National Homœopathic Medical Society. The invitation was responded to by a considerable number of the leading homœopathic practitioners of the country, who, according to previous arrangement, convened in the Lyceum of Natural History in New York City, on the 10th day of April, 1844, the eighty-ninth anniversary of the birth of the illustrious Hahnemann.

The convention was organized by electing Constantine Hering, M.D., of Philadelphia, Pa., President; Josiah F. Flagg, M.D., of Boston, Mass., and William Channing, M.D., of New York City, N. Y., Vice-Presidents; and Henry Dunnell, M.D., Secretary.

The following resolution was unanimously adopted:

Resolved, That it is deemed expedient to establish a society, entitled "The American Institute of Homœopathy."

John F. Gray, M.D., was elected General Secretary of the Institute, and S. R. Kirby, M.D., Treasurer.

The Convention having accomplished the object for which it had assembled, on motion, adjourned, *sine die.*

Immediately after the adjournment of the Convention, on the evening of the 10th day of April, 1844, at the call of John F. Gray, M.D., General Secretary-elect, the First Session of the American Institute of Homœopathy was held. Josiah F. Flagg, M.D., Boston, Mass., was elected Chairman, and A. Gerald Hull, M.D., New York City, N. Y., Provisional Secretary.

CHRONOLOGICAL LIST OF OFFICERS.

FIRST SESSION.

(*Held at New York City, N. Y., April* 10, 1844.)

JOSIAH F. FLAGG, M.D., Boston, Mass., Chairman.
JOHN F. GRAY, M.D., New York, N. Y., General Secretary.
A. GERALD HULL, M.D., New York, N. Y., Provisional Secretary.
S. R. KIRBY, M.D., New York, N. Y., Treasurer.

SECOND SESSION.

(*Held at New York City, N. Y., May* 14, 1845.)

JACOB JEANES, M.D., Philadelphia, Pa., Chairman.
EDWARD BAYARD, M.D., New York, N. Y., General Secretary.
R. A. SNOW, M.D., New York, N. Y., Provisional Secretary.
S. R. KIRBY, M.D., New York, N. Y., Treasurer.

THIRD SESSION.

(*Held at Philadelphia, Pa., May* 13, 1846.)

S. R. KIRBY, M.D., New York, N. Y., Chairman.
EDWARD BAYARD, M.D., New York, N. Y., General Secretary.
R. A. SNOW, M.D., New York, N. Y., Provisional Secretary.
S. R. KIRBY, M.D., New York, N. Y., Treasurer.

FOURTH SESSION.

(*Held at Boston, Mass., June* 9, 1847.)

F. R. McMANUS, M.D., Baltimore, Md., Chairman.
EDWARD BAYARD, M.D., New York, N. Y., General Secretary.
R. A. SNOW, M.D., New York, N. Y., Provisional Secretary.
S. R. KIRBY, M.D., New York, N. Y., Treasurer.

FIFTH SESSION.

(*Held at New York City, N. Y., June* 14, 1848.)

WALTER WILLIAMSON, M.D., Philadelphia, Pa., Chairman.
EDWARD BAYARD, M.D., New York, N. Y., General Secretary.
R. A. SNOW, M.D., New York, N. Y., Provisional Secretary.
S. R. KIRBY, M.D., New York, N. Y., Treasurer.

SIXTH SESSION.

(*Held at Philadelphia, Pa., June* 13, 1849.)

SAMUEL GREGG, M.D., Boston, Mass., Chairman.
ALVIN E. SMALL, M.D., Philadelphia, Pa., General Secretary.
WILLIAM P. ESREY, M.D., Springfield, Mass., Provisional Secretary.
S. R. KIRBY, M.D., New York, N. Y., Treasurer.

SEVENTH SESSION.

(*Held at Albany, N. Y., June* 12, 1850.)

EDWARD BAYARD, M.D., New York, N. Y., Chairman.
ALVIN E. SMALL, M.D., Philadelphia, Pa., General Secretary.
G. W. SWAZEY, M.D., Springfield, Mass., Provisional Secretary.
S. R. KIRBY, M.D., New York, N. Y., Treasurer.

EIGHTH SESSION.

(*Held at New Haven, Conn., June* 11, 1851.)

WILLIAM E. PAYNE, M.D., Bath, Me., Chairman.
G. W. SWAZEY, M.D., Springfield, Mass., General Secretary.
CHARLES G. FOOTE, M.D., New Haven, Conn., Provisional Secretary.
S. R. KIRBY, M.D., New York, N. Y., Treasurer.

NINTH SESSION.

(*Held at Baltimore, Md., May* 19, 1852.)

ELIAL T. FOOTE, M.D., New Haven, Conn., Chairman.
WILLIAM A. GARDINER, M.D., Philadelphia, Pa., General Secretary.
S. S. GUY, M.D., Brooklyn, N. Y., Provisional Secretary.
S. R. KIRBY, M.D., New York, N. Y., Treasurer.

TENTH SESSION.

(*Held at Cleveland, Ohio, June* 8, 1853.)

RICHARD GARDINER, M.D., Philadelphia, Pa., Chairman.
WILLIAM A. GARDINER, M.D., Philadelphia, Pa., General Secretary.
S. S. GUY, M.D., Brooklyn, N. Y., Provisional Secretary.
S. R. KIRBY, M.D., New York, N. Y., Treasurer.

ELEVENTH SESSION.

(*Held at Albany, N. Y., June* 7, 1854.)

LYMAN CLARY, M.D., Syracuse, N. Y., Chairman.
S. S. GUY, M.D., Brooklyn, N. Y., General Secretary.
J. REDMAN COXE, JR., M.D., Philadelphia, Pa., Provisional Secretary.
A. S. BALL, M.D., New York, N. Y., Treasurer.

TWELFTH SESSION.

(*Held at Buffalo, N. Y., June* 6, 1855.)

C. H. SKIFF, M.D., New Haven, Conn., Chairman.
J. P. DAKE, M.D., Pittsburg, Pa., General Secretary.
A. H. BEERS, M.D., Buffalo, N. Y., Provisional Secretary.
S. S. GUY, M.D., Brooklyn, N. Y., Treasurer.

THIRTEENTH SESSION.

(*Held at Washington, D. C., June* 4, 1856.)

G. W. SWAZEY, M.D., Springfield, Mass., Chairman.
F. R. McMANUS, M.D., Baltimore, Md., General Secretary.
J. MIDDLETON, M.D., Baltimore, Md., Provisional Secretary.
S. S. GUY, M.D., Brooklyn, N. Y., Treasurer.

FOURTEENTH SESSION.

(*Held at Chicago, Ill., June* 3, 1857.)

J. P. DAKE, M.D., Pittsburg, Pa., Chairman.
D. S. SMITH, M.D., Chicago, Ill., General Secretary.
G. E. SHIPMAN, M.D., Chicago, Ill., Provisional Secretary.
S. S. GUY, M.D., Brooklyn, N. Y., Treasurer.

FIFTEENTH SESSION.

(*Held at Brooklyn, N. Y., June* 2, 1858.)

D. S. SMITH, M.D., Chicago, Ill., Chairman.
WILLIAM E. PAYNE, M.D., Bath, Me., General Secretary.
E. T. RICHARDSON, M.D., Brooklyn, N. Y., Provisional Secretary.
S. S. GUY, M.D., Brooklyn, N. Y., Treasurer.

SIXTEENTH SESSION.

(*Held at Boston, Mass., June* 1, 1859.)

P. P. WELLS, M.D., Brooklyn, N. Y., Chairman.
HENRY D. PAYNE, M.D., Albany, N. Y., General Secretary.
I. T. TALBOT, M.D., Boston, Mass., Provisional Secretary.
C. H. SKIFF, M.D., New Haven, Conn., Treasurer.

SEVENTEENTH SESSION.

(*Held at Philadelphia, Pa., June* 2, 1860.)

E. C. WITHERELL, M.D., Cincinnati, O., Chairman.
JACOB BEAKLEY, M.D., New York, N. Y., General Secretary.
HENRY M. SMITH, M.D., New York, N. Y., Provisional Secretary.
C. D. SKIFF, M.D., Brooklyn, N. Y., Treasurer.

EIGHTEENTH SESSION.*

(*Held at Cincinnati, Ohio, June* 7, 1865.)

S. S. GUY, M.D., Brooklyn, N. Y., President.
I. T. TALBOT, M.D., Boston, Mass., Vice-President.†
G. D. BEEBE, M.D., Chicago, Ill., General Secretary.
WILLIAM TOD HELMUTH, M.D., St. Louis, Mo., Provisional Secretary.
D. S. SMITH, M.D., Chicago, Ill., Treasurer.

NINETEENTH SESSION.

(*Held at Pittsburg, Pa., June* 6, 1866.)

J. S. DOUGLAS, M.D., Milwaukee, Wis., President.
S. R. BECKWITH, M.D., Cleveland, O., Vice-President.
I. T. TALBOT, M.D., Boston, Mass., General Secretary.
HENRY B. CLARKE, M.D., New Bedford, Mass., Provisional Secretary.
E. M. KELLOGG, M.D., New York, N. Y., Treasurer.

TWENTIETH SESSION.

(*Held at New York City, N. Y., June* 4, 1867.)

WILLIAM TOD HELMUTH, M.D., St. Louis, Mo., President.
P. P. WELLS, M.D., Brooklyn, N. Y., Vice-President.
I. T. TALBOT, M.D., Boston, Mass., General Secretary.
HORACE M. PAINE, M.D., Albany, N. Y., Provisional Secretary.
E. M. KELLOGG, M.D., New York, N. Y., Treasurer.

TWENTY-FIRST SESSION.

(*Held at St. Louis, Mo., June* 2, 1868.)

HENRY D. PAINE, M.D., New York, N. Y., President.
T. G. COMSTOCK, M.D., St. Louis, Mo., Vice-President.
I. T. TALBOT, M.D., Boston, Mass., General Secretary.
H. L. CHASE, M.D., Cambridge, Mass., Provisional Secretary.
E. M. KELLOGG, M.D., New York, N. Y., Treasurer.

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* No sessions were held during the Rebellion.

† By a change of the By-Laws, the Chairman became President, and the office of Vice-President was instituted at this session.

TWENTY-SECOND SESSION.

(*Held at Boston, Mass., June* 8, 1869.)

REUBEN LUDLAM, M.D., Chicago, Ill., President.
D. H. BECKWITH, M.D., Cleveland, O., Vice-President.
I. T. TALBOT, M.D., Boston, Mass., General Secretary.
TIMOTHY F. ALLEN, M.D., New York, N. Y., Provisional Secretary.
E. M. KELLOGG, M.D., New York, N. Y., Treasurer.

TWENTY-THIRD SESSION.

(*Held at Chicago, Ill., June* 7, 1870.)

DAVID THAYER, M.D., Boston, Mass., President.
J. J. YOULIN, M.D., Jersey City, N. J., Vice-President.
REUBEN LUDLAM, M.D., Chicago, Ill., General Secretary.
T. C. DUNCAN, M.D., Chicago, Ill., Provisional Secretary.
E. M. KELLOGG, M.D., New York, N. Y., Treasurer.

TWENTY-FOURTH SESSION.

(*Held at Philadelphia, Pa., June* 6, 1871.)

D. H. BECKWITH, M.D., Cleveland, O., President.
J. D. TEMPLE, M.D., St. Louis, Mo., Vice-President.
REUBEN LUDLAM, M.D., Chicago, Ill., General Secretary.
T. C. DUNCAN, M.D., Chicago, Ill., Provisional Secretary.
E. M. KELLOGG, M.D., New York, N. Y., Treasurer.

TWENTY-FIFTH SESSION.

(*Held at Washington, D. C., June* 21, 1872.)

I. T. TALBOT, M.D., Boston, Mass., President.
J. J. YOULIN, M.D., Jersey City, N. J., Vice-President.
ROBERT J. McCLATCHEY, M.D., Philadelphia, Pa., General Secretary.
BUSHROD W. JAMES, M.D., Philadelphia, Pa., Provisional Secretary.
E. M. KELLOGG, M.D., New York, N. Y., Treasurer.

TWENTY-SIXTH SESSION.

(*Held at Cleveland, Ohio, June* 3, 1873.)

ALVIN E. SMALL, M.D., Chicago, Ill., President.
J. C. BURGHER, M.D., Pittsburg, Pa., Vice-President.
ROBERT J. McCLATCHEY, M.D., Philadelphia, Pa., General Secretary.
BUSHROD W. JAMES, M.D., Philadelphia, Pa., Provisional Secretary.
E. M. KELLOGG, M.D., New York, N. Y., Treasurer.

TWENTY-SEVENTH SESSION.

(*Held at Niagara Falls, N. Y., June* 9, 1874.)

JOHN J. YOULIN, M.D., Jersey City, N. J., President.
N. SCHNEIDER, M.D., Cleveland, O., Vice-President.
ROBERT J. McCLATCHEY, M.D., Philadelphia, Pa., General Secretary.
BUSHROD W. JAMES, M.D., Philadelphia, Pa., Provisional Secretary.
E. M. KELLOGG, M.D., New York, N. Y., Treasurer.

TWENTY-EIGHTH SESSION.

(*Held at Put-in-Bay, Ohio, June* 16, 1875.)

WILLIAM H. HOLCOMBE, M.D., New Orleans, La., President.
L. E. OBER, M.D., La Crosse, Wis., Vice-President.
ROBERT J. McCLATCHEY, M.D., Philadelphia, Pa., General Secretary.
BUSHROD W. JAMES, M.D., Philadelphia, Pa., Provisional Secretary.
E. M. KELLOGG, M.D., New York, N. Y., Treasurer.

TWENTY-NINTH SESSION.

(*Held at Philadelphia, Pa., June* 26 *to July* 1, 1876, *in conjunction with the World's Homœopathic Convention; the officers of the Institute being constituted the officers of the Convention.*)

CARROLL DUNHAM, M.D., Irvington-on-Hudson, N. Y., President.
E. C. FRANKLIN, M.D., St. Louis, Mo., Vice-President.
ROBERT J. McCLATCHEY, M.D., Philadelphia, Pa., General Secretary.
T. C. DUNCAN, M.D., Chicago, Ill., Provisional Secretary.
E. M. KELLOGG, M.D., New York, N. Y., Treasurer.

THIRTIETH SESSION.

(*Held at Lake Chautauqua, N. Y., June* 26, 1877.)

E. C. FRANKLIN, M.D., St. Louis, Mo., President.
T. P. WILSON, M.D., Cincinnati, O., Vice-President.
ROBERT J. McCLATCHEY, M.D., Philadelphia, Pa., General Secretary.
JOSEPH C. GUERNSEY, M.D., Philadelphia, Pa., Provisional Secretary.
E. M. KELLOGG, M.D., New York, N. Y., Treasurer.

THIRTY-FIRST SESSION.

(*Held at Put-in-Bay, Ohio, June* 18, 1878.)

JOHN C. BURGHER, M.D., Pittsburg, Pa., President.
J. C. SANDERS, M.D., Cleveland, O., Vice-President.
ROBERT J. McCLATCHEY, M.D., Philadelphia, Pa., General Secretary.
JOSEPH C. GUERNSEY, M.D., Philadelphia, Pa., Provisional Secretary.
E. M. KELLOGG, M.D., New York, N. Y., Treasurer.

THIRTY-SECOND SESSION.

(*Held at Lake George, N. Y., June* 17, 1879.)

CONRAD WESSELHOEFT, M.D., Boston, Mass., President.
N. FRANCIS COOKE, M.D., Chicago, Ill., Vice-President.
ROBERT J. McCLATCHEY, M.D., Philadelphia, Pa., General Secretary.
JOSEPH C. GUERNSEY, M.D., Philadelphia, Pa., Provisional Secretary.
E. M. KELLOGG, M.D., New York, N. Y., Treasurer.

THIRTY-THIRD SESSION.

(*Held at Milwaukee, Wis., June* 18, 1880.)

T. P. WILSON, M.D., Ann Arbor, Mich., President.
GEORGE A. HALL, M.D., Chicago, Ill., Vice-President.
J. C. BURGHER, M.D., Pittsburg, Pa., General Secretary.
J. H. McCLELLAND, M.D., Pittsburg, Pa., Provisional Secretary.
E. M. KELLOGG, M.D., New York, N. Y., Treasurer.

THIRTY-FOURTH SESSION.

(*Held at Brighton Beach, N. Y., June* 14, 1881.)

J. W. DOWLING, M.D., New York, N. Y., President.
W. L. BREYFOGLE, M.D., Louisville, Ky., Vice-President.
J. C. BURGHER, M.D., Pittsburg, Pa., General Secretary.
J. H. McCLELLAND, M.D., Pittsburg, Pa., Provisional Secretary.
E. M. KELLOGG, M.D., New York, N. Y., Treasurer.

THIRTY-FIFTH SESSION.

(*Held at Indianapolis, Ind., June* 13, 1882.)

W. L. BREYFOGLE, M.D., Louisville, Ky., President.
BUSHROD W. JAMES, M.D., Philadelphia, Pa., Vice-President.
J. C. BURGHER, M.D., Pittsburg, Pa., General Secretary.
JOSEPH C. GUERNSEY, M.D., Philadelphia, Pa., Provisional Secretary.
E. M. KELLOGG, M.D., New York, N. Y., Treasurer.

THIRTY-SIXTH SESSION.

(*Held at Niagara Falls, N. Y., June* 19, 1883.)

BUSHROD W. JAMES, M.D., Philadelphia, Pa., President.
O. S. RUNNELS, M.D., Indianapolis, Ind., Vice-President.
J. C. BURGHER, M.D., Pittsburg, Pa., General Secretary.
T. M. STRONG, M.D., Ward's Island, N. Y., Provisional Secretary.
E. M. KELLOGG, M.D., New York, N. Y., Treasurer.

THIRTY-SEVENTH SESSION.

(*Held at Deer Park, Md., June* 17, 1884.)

JOHN C. SANDERS, M.D., Cleveland, O., President.
T. F. ALLEN, M.D., New York, N. Y., Vice-President.
J. C. BURGHER, M.D., Pittsburg, Pa., General Secretary.
T. M. STRONG, M.D., Ward's Island, N. Y., Provisional Secretary.
E. M. KELLOGG, M.D., New York, N. Y., Treasurer.

THIRTY-EIGHTH SESSION.

(*Held at St. Louis, Mo., June* 2, 1885.)

TIMOTHY F. ALLEN, M.D., New York, N. Y., President.
A. C. COWPERTHWAITE, M.D., Iowa City, Ia., Vice-President.
J. C. BURGHER, M.D., Pittsburg, Pa., General Secretary.
T. M. STRONG, M.D., Ward's Island, N. Y., Provisional Secretary.
E. M. KELLOGG, M.D., New York, N. Y., Treasurer.

THIRTY-NINTH SESSION.

(*Held at Saratoga Springs, N. Y., June* 28, 1886.)

O. S. RUNNELS, M.D., Indianapolis, Ind., President.
A. I. SAWYER, M.D., Monroe, Mich., Vice-President.
J. C. BURGHER, M.D., Pittsburg, Pa., General Secretary.
T. M. STRONG, M.D., Ward's Island, N. Y., Provisional Secretary.
E. M. KELLOGG, M.D., New York, N. Y., Treasurer.

FORTIETH SESSION.

(*Held at Saratoga Springs, N. Y., June* 27, 1887.)

F. H. ORME, M.D., Atlanta, Ga., President.
A. R. WRIGHT, M.D., Buffalo, N. Y., Vice-President.
J. C. BURGHER, M.D., Pittsburg, Pa., General Secretary.
T. M. STRONG, M.D., Ward's Island, N. Y., Provisional Secretary.
E. M. KELLOGG, M.D., New York, N. Y., Treasurer.

FORTY-FIRST SESSION.

(*Held at Niagara Falls, N. Y., June* 29, 1888.)

A. C. COWPERTHWAITE, M.D., Iowa City, Ia., President.
N. SCHNEIDER, M.D., Cleveland, O., Vice-President.
PEMBERTON DUDLEY, M.D., Philadelphia, Pa., General Secretary.
T. M. STRONG, M.D., Ward's Island, N. Y., Provisional Secretary.
E. M. KELLOGG, M.D., New York, N. Y., Treasurer.

FORTY-SECOND SESSION.

(*Held at Minnetonka Beach, Minn., June* 24, 1889.)

SELDEN H. TALCOTT, M.D., Middletown, N. Y., President.
THEO. Y. KINNE, M.D., Paterson, N. J., Vice-President.
PEMBERTON DUDLEY, M.D., Philadelphia, Pa., General Secretary.
T. M. STRONG, M.D., Ward's Island, N. Y., Provisional Secretary.
E. M. KELLOGG, M.D., New York, N. Y., Treasurer.

FORTY-THIRD SESSION.

(*Held at Waukesha, Wis., June* 16, 1890.)

ALFRED I. SAWYER, M.D., Monroe, Mich., President.
J. D. BUCK, M.D., Cincinnati, O., Acting President.
CHESTER G. HIGBEE, M.D., St. Paul, Minn., Vice-President.
PEMBERTON DUDLEY, M.D., Philadelphia, Pa., General Secretary.
T. M. STRONG, M.D., Macon, Ga., Provisional Secretary.
E. M. KELLOGG, M.D., New York, N. Y., Treasurer.

[NOTE.—The appointment of an Acting President was made necessary by the illness of the President and the absence of the Vice-President.]

FORTY-FOURTH SESSION.

(*Held at Atlantic City, N. J., in conjunction with the Fourth International Homœopathic Congress, June* 16, 1891.)

THEO. Y. KINNE, M.D., Paterson, N. J., President.
JAMES H. McCLELLAND, M.D., Pittsburg, Pa., Vice-President.
PEMBERTON DUDLEY, M.D., Philadelphia, Pa., General Secretary.
T. M. STRONG, M.D., Macon, Ga., Provisional Secretary.
E. M. KELLOGG, M.D., New York, N. Y., Treasurer.
THOS. FRANKLIN SMITH, M.D., New York, N. Y., Assistant Treasurer.

FORTY-FIFTH SESSION.

(*Held at Washington, D. C., June* 13, 1892.)

THEO. Y. KINNE, M.D., Paterson, N. J., President.
JAMES H. McCLELLAND, M.D., Pittsburg, Pa., Vice-President.
PEMBERTON DUDLEY, M.D., Philadelphia, Pa., General Secretary.
T. M. STRONG, M.D., Boston, Mass., Provisional Secretary.
E. M. KELLOGG, M.D., New York, N. Y., Treasurer.
THOS. FRANKLIN SMITH, M.D., New York, N. Y., Assistant Treasurer.

FORTY-SIXTH SESSION.

(*Held at Chicago, Ill.*, 1893.)

JAMES H. McCLELLAND, M.D., Pittsburg, Pa., President.
C. E. FISHER, M.D., Chicago, Ill., First Vice-President.
MILLIE J. CHAPMAN, M.D., Pittsburg, Pa., Second Vice-President.
PEMBERTON DUDLEY, M.D., Philadelphia, Pa., General Secretary.
T. M. STRONG, M.D., Boston, Mass., Provisional Secretary.
E. M. KELLOGG, M.D., New York, N. Y., Treasurer.
THOS. FRANKLIN SMITH, M.D., New York, N. Y., Assistant Treasurer.

FORTY-SEVENTH SESSION.

(*Held at Denver, Col.*, 1894.)

JAMES H. McCLELLAND, M.D., Pittsburg, Pa., President.
C. E. FISHER, M.D., Chicago, Ill., First Vice-President.
MILLIE J. CHAPMAN, M.D., Pittsburg, Pa., Second Vice-President.
PEMBERTON DUDLEY, M.D., Philadelphia, Pa., General Secretary.
T. M. STRONG, M.D., Boston, Mass., Provisional Secretary.
E. M. KELLOGG, M.D., New York, N. Y., Treasurer.
THOS. FRANKLIN SMITH, M.D., New York, N. Y., Assistant Treasurer.

FIFTY-FIRST SESSION.

(*Held at Newport, R. I.*, 1895.)

CHARLES E. FISHER, M.D., Chicago, Ill., President.
J. B. GREGG CUSTIS, M.D., Washington, D.C., First Vice-President.
EUGENE F. STORKE, M.D., Denver, Col., Second Vice-President.
EUGENE H. PORTER, M.D., 181 W. 73d St., New York, N. Y., Gen. Sec.
FRANK KRAFT, M.D., Cleveland, O., Recording Secretary.
E. M. KELLOGG, M.D., New York, N. Y., Treasurer.
THOS. FRANKLIN SMITH, M.D., New York, N. Y., Assistant Treasurer.

FIFTY-SECOND SESSION.

(*Held at Detroit, Mich.*, 1896.)

PEMBERTON DUDLEY, M.D., Philadelphia, Pa., President.
D. A. MacLACHLAN, M.D., Detroit, Mich., First Vice-President.
J. C. BUDLONG, M.D., Providence, R. I., Second Vice-President.
EUGENE H. PORTER, M.D., 181 W. 73d St., New York, N. Y., Gen. Sec.
FRANK KRAFT, M.D., Cleveland, O., Recording Secretary.
E. M. KELLOGG, M.D., New York, N. Y., Treasurer.
T. FRANKLIN SMITH, M.D., New York, N. Y., Assistant Treasurer.

FIFTY-THIRD SESSION.

(*Held at Buffalo, N. Y.*, 1897.)

J. B. G. CURTIS, M.D., Washington, D. C., President.
CHAS. E. WALTON, M.D., Cincinnati, O., First Vice-Pres.
C. C. MILLER, M.D., Detroit, Mich., Second Vice-Pres.
EUGENE H. PORTER, M.D., 181 W. 73d St., New York, N.Y., Gen. Sec.
FRANK KRAFT, M.D., Cleveland, O., Recording Secretary.
E. M. KELLOGG, M.D., New York, N. Y., Treasurer.
T. FRANKLIN SMITH, M.D., New York, N. Y., Assistant Treas.

FIFTY-FOURTH SESSION.

(*Held at Omaha, Neb.*, 1898.)

A. R. WRIGHT, M.D., 414 Elmwood Avenue, Buffalo, N. Y., President.
WM. E. GREEN, M.D., Little Rock, Ark., First Vice-Pres.
CHARLES GATCHELL, M.D., 162 30th St., Chicago, Ill., Second Vice-Pres.
EUGENE H. PORTER, M.D., 181 W. 73d St., New York, N. Y., Gen. Sec.
FRANK KRAFT, M.D., 57 Bell Avenue, Cleveland, O., Recording Sec.
E. M. KELLOGG, M.D., 115 E. 37th St., New York, N. Y., Treasurer.
T. FRANKLIN SMITH, M.D., 264 Lenox Ave., New York, N. Y., Asst. Treas.

CONSTITUTION AND BY-LAWS.

CONSTITUTION.

ADOPTED JUNE 10, 1874.

Article I.—Name and Object.

THIS Association shall be styled the AMERICAN INSTITUTE OF HOMŒOPATHY, and its object the improvement of Homœopathic therapeutics and all other departments of medical science.

Article II.—Members.

The Institute shall be composed of those physicians who are already members, and of such others as may be hereafter chosen in conformity with the By-Laws.

Article III.—Officers.

The officers of the Institute shall be a President, two Vice-Presidents, who shall be designated "First" and "Second," a General Secretary, a Recording Secretary, a Treasurer and an Assistant Treasurer, with such other officers as shall be designated by the By-Laws, to be chosen at such time, in such manner, for such a period, and with such duties as the By-Laws shall ordain.

Article IV.—Seal.

The Institute shall have and use one common seal, with a suitable device and inscription.

Article V.—Amendments.

This Constitution may be altered or amended by a vote of two-thirds of all the members present at the regular annual meeting, provided that notice of such alteration or amendment shall have been given in writing at any session of a previous annual meeting of the Institute.

BY-LAWS.

ADOPTED JUNE 2, 1893.

Article I.—Meetings.

THIS Institute shall hold at least one session in each year, at such time and place as may be determined upon from time to time.

Article II.—Officers.

SECTION 1. The officers shall be elected by ballot at each annual session of the Institute, and shall enter upon their respective duties the first day of January following.

SEC. 2. The officers of the Institute, viz., the President, Vice-Presidents, General Secretary, Recording Secretary, Treasurer and Assistant Treasurer, shall constitute an Executive Committee, which shall arrange the business of the session, attend to matters of business not otherwise specially provided for, and perform such other duties as may by vote of the Institute devolve upon them.

SEC. 3. The General Secretary shall be paid an annual salary of one thousand dollars.

Article III.—Duties of Officers.

SECTION 1. The President shall preside at the meetings of the Institute and perform the duties usually pertaining to his office, together with such others as may by vote of the Institute devolve upon him. He shall sign all certificates of membership. He shall deliver an address at the opening of each session, and make such suggestions as he may deem necessary for the Institute to take action on during the session; and he may also consider any subject relating to medical science.

SEC. 2. The Vice-Presidents in their order shall perform the duties of the President in his absence or disability.

SEC. 3. The General Secretary shall keep a record of the proceedings of the meetings, conduct the correspondence of the Institute, issue notices of meetings, notify members of their election, sign certificates of membership, and perform such other duties as the Institute may direct. It shall further be the duty of the Secretary to send to each Homœopathic journal published in the country, within two months after the adjournment of an annual meeting, a list of the officers for the ensuing year and the members of its sections.

SEC. 4. The Recording Secretary shall assist the General Secretary, and in his absence perform his duties.

SEC. 5. It shall be the special duty of the Recording Secretary to make, or provide, stenographic reports of all scientific discussions of the Institute and of its sections, and of all debates upon the reports and papers

presented by the Standing Committees. He shall send copies of these scientific discussions for revision and correction to their authors respectively, who shall be required to return them within one week after their reception, when they shall be furnished to the General Secretary for publication in the TRANSACTIONS. The compensation for such services shall be two hundred dollars per annum, and the necessary expenses of his attendance at the session shall be paid by the Institute.

SEC. 6. In the absence or disability of the Recording Secretary, his duties shall devolve upon the General Secretary.

SEC. 7. The Treasurer shall receive all money belonging to the Institute, and make all disbursements under the recommendation of the Executive Committee. He shall furnish at each annual meeting a written report of the condition of the finances.

SEC. 8. The Assistant Treasurer shall render aid to the Treasurer, and, in his absence or disability, perform his duties.

SEC. 9. There shall be elected annually a Registrar, who shall attend to the registration of members present at the annual sessions, the preparation of a daily roster, and the distribution of the appropriate badges to members and visitors. He shall make a full report to the General Secretary at the close of the annual meeting.

Article IV.—Censors.

There shall be a Board of Censors, consisting of five members (three of whom shall constitute a quorum), who shall receive and examine the credentials of candidates for membership, and report to the Institute for election such as may be found properly qualified. One member of said Board shall be elected by ballot at each annual session, to serve for five years from the first day of January next succeeding said election.

Article V.—Membership.

SECTION 1. Candidates for membership shall present to the Board of Censors a certificate of three members of the Institute that the applicant has pursued a regular course of medical studies according to the requirements of the existing institutions of this country, and sustains a good moral character and professional standing. Such certificate shall state when and where the applicant obtained a diploma. If found qualified, the candidate may be elected a member. No person shall be considered a member, however, before paying an admission fee of two dollars, and the annual dues, which shall entitle him to a certificate of membership.

SEC. 2. No physician, graduated subsequent to the year 1891, shall be eligible to membership, unless said graduation has followed three full annual courses of didactic and clinical lectures of not less than six months each.

SEC. 3. Members shall pay annually the sum of five dollars toward defraying the expenses of the Institute. The TRANSACTIONS of the Institute shall be sent to those members only who have paid their dues.

SEC. 4. Members neglecting the payment of dues for three years, after proper notification from the Treasurer, shall have their names dropped from the roll of membership. Any person thus dropped shall have the privilege of reinstatement by paying all arrearages, on recommendation of the Board of Censors.

SEC. 5. The Executive Committee shall be authorized to remit, *sub silentia*, the dues of those who, for ten years, have been in good membership and have paid their dues during that time, provided that such members are unable to continue payment of their annual dues.

SEC. 6. All members of the Institute who have maintained twenty-five consecutive years of membership shall be considered *Senior Members*, and be exempt from the payment of annual dues; and the names of such members shall be printed first in the list of members, in capital letters

SEC. 7. Any foreign physician may be elected a Corresponding Member of the Institute at any annual meeting, on recommendation of the Board of Censors, and shall have all the privileges of members, except voting and eligibility to office.

SEC. 8. The Institute may, at any annual meeting, elect as Honorary Members, not to exceed five in one year, any foreign physicians who may be judged worthy from their superior attainments in medicine; provided, that the names of persons proposed for Honorary Membership shall have been presented at a previous annual meeting. Such Honorary Members shall have all the privileges of members except voting and eligibility to office.

SEC. 9. The Institute may, at any annual meeting, elect as Honorary Associate Members, not to exceed three in any one year, any persons not members of the medical profession, who have in any way been of special service to science and humanity, and particularly those who have been special patrons of Homœopathy; and said Honorary Associate Members shall have all the privileges of Honorary Members.

SEC. 10. Any physician properly accredited as a Delegate shall be admitted during the session of the Institute to all the privileges of members, except voting and eligibility to office, on the following basis:

First. From every association composed of more than fifty members from different States, two delegates, with an additional delegate for every twenty members.

Second. From every State society, two delegates, with an additional delegate for every twenty members.

Third. From every county or local society, one delegate.

Fourth. From every hospital, asylum for the insane, or dispensary actually established, one delegate.

Fifth. From every medical journal published, one delegate.

Sixth. From every college associated with the Institute, two delegates; said delegates to constitute the Intercollegiate Committee of the Institute.

Article VI.—Sections.

SECTION 1. The following SECTIONS shall be appointed as hereinafter provided for:

a. Materia Medica and General Therapeutics.

b. Clinical Medicine and Pathology.

c. Obstetrics.

d. Gynecology.

e. Pedology.

f. Sanitary Science and Public Health.

g. Surgery.

h. Neurology and Electro-therapeutics.

i. Ophthalmology, Otology, and Laryngology.

SEC. 2. Each of these sections shall consist of not less than five members.

SEC. 3. The chairman of each section in his address shall include a *résumé* of progress in discovery in the special field to which said section pertains.

SEC. 4. The President shall appoint the chairmen of all sections for the ensuing year; and shall announce all such appointments as early in the progress of the session as practicable. But no member of a section who has failed to perform active service thereon shall be appointed to its Chairmanship for the ensuing year.

SEC. 5. The chairman of each section, as soon as possible after appointment, shall select his associates and complete the organization of his section by the appointment of a secretary. He shall within one month after his appointment send to the General Secretary a list of the officers and members of his section. In case of failure to comply with the provisions of this section, the President is authorized to appoint another Chairman.

SEC. 6. No member shall serve on more than one section in any one year. If any member's name occurs in more than one section he shall be notified by the Secretary to elect the one to which he wishes to be assigned.

SEC. 7. Vacancies occurring in any section may be filled by its Chairman, who shall give immediate notice thereof to the General Secretary.

Article VII.—Committees.

SECTION 1. The following STANDING COMMITTEES shall be appointed, as hereinafter provided for:

a. Organization, Registration, and Statistics.

b. Legislation.

c. Medical Literature.

d. International Bureau of Homœopathy at Washington, D. C.

e. Intercollegiate.

f. Medical Education.

g. Drug Provings.

SEC. 2. The Committee on Legislation shall consist of five members

and the Committee on Drug Provings of seven members. The term of service of one member in each of these Committees shall expire each year. The Intercollegiate Committee shall consist of two delegates to be appointed by each college represented in the Institute, and shall appoint its own chairman. The remaining Standing Committees shall consist of at least five members each, who shall serve for one year.

SEC. 3. There shall also be appointed each year, Committees on Local Arrangements, on Transportation, on Press, on Resolutions and Business and on the Memorial Service, of not less than three members each. The duties of said Committees shall be such as are indicated by their respective titles. All resolutions presented to the Institute shall be referred without debate to the Committee on Resolutions.

SEC. 4. The President, so far as these By-Laws require, shall appoint each of the Committees provided for in this article, immediately upon the presentation and disposition of its report.

SEC. 5. All Committees or members appointed to perform any special work under the authority of this Institute shall serve without compensation, unless otherwise specifically ordered.

Article VIII.—Committee on Publication.

SECTION 1. The Committee on Publication shall consist of three members of the Institute, to be appointed annually by the Executive Committee, whose duty shall be to pass upon all papers or reports presented to the Institute, and the decision of such Committee as to the publication of papers or reports shall be final.

SEC. 2. No report or paper referred to the Committee on Publication shall be rejected except with the formal concurrence of a majority of said Committee. All papers so rejected shall be returned to their authors by the General Secretary.

SEC. 3. The TRANSACTIONS of the Institute shall be issued by the General Secretary, under the direction of the Committee on Publication, within five months after the close of the session, and copies shall be delivered to those entitled to them, without individual expense.

SEC. 4. There shall be published in each annual volume of the TRANSACTIONS: 1. A list of senior members arranged according to their years of membership. 2. An alphabetical list of members, including the names of senior members in CAPITALS. 3. A list of members classified by States. The complete list of Members of the Institute from its organization, and its Code of Ethics, shall be published every five years.

SEC. 5. The General Secretary shall furnish editorial copies of the TRANSACTIONS to such homœopathic journals as are sent to the Institute in exchange, and to other selected journals.

SEC. 6. The Secretary shall send copies of the Statistical Reports to all societies, hospitals and dispensaries that make reports to the Committee on Organization, Registration, and Statistics.

Article IX.—Rules of Order.

SECTION 1. The names and residences of all applicants for membership shall be announced in alphabetical order by the Board of Censors in open session, at least six hours before their election is voted upon.

SEC. 2. The Report of the Necrologist shall be presented in connection with the Report of the Committee on Memorial Service.

SEC. 3. The time allotted to any Committee for the presentation of its report shall not exceed fifteen minutes. No report shall be received from any Committee except in writing.

SEC. 4. No report or paper shall be received by the Institute in an incomplete or unfinished condition, and no paper shall be published in the TRANSACTIONS which has been published previous to its presentation to the Institute, or which is not handed to the General Secretary before the close of the session.

SEC. 5. Meetings of any section may be held at the call of its Chairman, provided such meetings be not held during the sittings of the Institute, nor during the meetings of the other sections, except as provided in the adopted Order of Business.

SEC. 6. In all discussions no speaker shall be allowed more than five minutes, nor to speak more than once upon the same subject, except by a vote of consent taken in the usual manner.

SEC. 7. The election of officers for the ensuing year, and the determination of the next place for the meeting of the Institute, shall take place on the second morning of the session, at 10 A.M., Sunday excepted. The nominations shall be made on the first morning of the session, at 10 A.M., in the following way: Nomination papers shall be furnished by the General Secretary on the first day of the session, and any person receiving the indorsement of ten members shall be considered a nominee, provided no indorser's name appear on more than one paper for that office. If no nomination papers are handed in, it shall be the duty of the Executive Committee to see that at least one paper shall be prepared for each of the elective offices. No nomination shall be considered after the President has declared the nominations closed. These papers shall immediately be placed in charge of a special committee of three, to be appointed by the President, to which shall be added the Treasurer and Register *ex officio*. The duties of this committee shall be, first, to prepare an official ballot, on which the names of all nominees shall be placed in alphabetical order for the office to which they are nominated. Second. To take general charge of the election, which shall occur on the second morning of the Institute session, excepting Sunday, at 10 A.M., the polls to be open two hours, and in such manner as not to interfere with the general work of the session. Third. In conjunction with the General Secretary and Treasurer, to prepare a roster of members in good standing, which shall be used as a check-list and ultimate judge as to voting and qualifications of members. Upon declaration of the result, should no election be had for any office, the Institute shall, in open session, elect from the two candidates receiving the highest number of votes which person it prefers. Mem-

bers shall vote by the method known as the Australian system, *i.e.*, putting a cross opposite the name of the person voted for. Should more marks be placed than the office calls for, such ballot shall be invalidated, so far as that particular office is concerned. The inspectors of election shall report when and as the Institute may direct.

SEC. 8. At the conclusion of the work of each section its Chairman shall present in writing to the Institute, in general session, a report of its meetings, and shall at the same time hand to the General Secretary its reports, addresses, and papers, which shall remain in his hands until the TRANSACTIONS are printed.

Article X.

All complaints relating to violations of the Code of Ethics for the Institute shall be referred to the Senate of Seniors for consideration and adjustment, and its decision shall be final, without further action of the Institute; except in such cases as require disciplinary action, when the Senate shall report to the Institute with recommendations.

Questions in dispute, having a bearing upon the general good of Homœopathy, which may be brought before the Institute for review and judgment, shall be referred to the Senate of Seniors for adjustment. In order to appeal from its decision a two-thirds vote of members present and voting shall be necessary, said vote to be had without debate; all appeals thus ordered shall be heard at a special hour set for the purpose, and shall be considered in Executive Session.

Article XI.—Amendments.

These By-Laws may be altered or amended by a vote of two-thirds of the members present at any session of the annual meeting, provided that notice of such alteration or amendment shall have been given at the previous annual meeting. They may be suspended at any session of the annual meeting by a two-thirds vote of the members present.

STANDING RESOLUTIONS.

1. *Resolved*, That the American Institute of Homœopathy does not necessarily indorse the doctrine contained in the reports of committees by accepting and publishing such reports with the *Proceedings.—Adopted June* 4, 1867.

2. *Resolved*, That hereafter all provings by a single prover, presented through the Section in Materia Medica, Pharmacy and Provings, be referred back to the section, to be retained by it until a sufficient number of provings are obtained to warrant the section in collating the same and presenting them to the Institute for publication; and such collation and presentation shall be a part of the duty of that section.—*Adopted June* 9, 1874.

3. *Resolved*, That this Institute condemns the action of any college which graduates an unsuccessful candidate from another college, unless he attends at least one full course of lectures at the college where he applies for a degree.—*Adopted June* 30, 1886.

4. *Resolved*, That in making up the list of existing journals illustrating Homœopathy by the Committee on Organization, Registration, and Statistics, and the Committee on Medical Literature, all such shall be embraced as avow the principle of similars as the dominating principle for the selection of drugs in the care of the sick, and which also support the organizations of Homœopathy as a distinctive body in the medical profession; that no journal thus listed shall be stricken off without formal notice through the General Secretary to the Institute of the reason for any proposed omission from the list, and then not without due notice and opportunity for defence on the part of the journal under consideration, final action on the case being deferred until the succeeding annual meeting. But the name of any journal may be dropped from the list before September, 1889, after failure to signify its assent to the preceding conditions of its listing, and, if assenting, after subsequent failure to make report to the Institute for three consecutive years.—*Adopted June* 27, 1889.

5. *Resolved*, That the American Institute of Homœopathy cordially endorses and approves the action of the Intercollegiate Committee, by which four years has been made the required term of medical study, and the studies of the first year have been definitely arranged to include the preliminary studies requisite to more advanced medical instruction.

6. *Resolved*, That it is the duty of every member of the Institute to assist and sustain the medical colleges in their efforts.—*Adopted June* 20, 1890.

7. *Resolved*, That the Committee on Local Arrangements be instructed to respect the working hours of the Institute session, and to make no provision for entertainments to the members except during the intermissions of the session.—*Adopted June* 20, 1890.

8. *Resolved*, That the American Institute of Homœopathy, systematically, and from year to year, investigate the comparative mortality per cent., as shown in the Health Offices of all the larger cities of the United States, and give the results of said investigation the widest possible publicity.—*Adopted June* 17, 1892.

9. *Resolved*, That the Institute shall begin its annual session at or about the middle of the week, and continue as long as the work of the sections requires, according to the judgment of the Executive Committee. —*Adopted June* 1, 1893.

10. *Resolved*, That beginning with the session of 1895-96 all colleges recognized by the Intercollegiate Committee of the American Institute of Homœopathy shall require attendance on four courses of lectures of not less than six months each, in separate years.—*Adopted June* 20, 1894.

11. *Resolved*, That while the Intercollegiate Committee of the American Institute of Homœopathy would regard with favor any movement looking to the establishment of chairs of Homœopathic Therapeutics or Materia Medica in any college or university in which such chairs do not now exist, it would most unqualifiedly condemn any movement to transfer any existing Homœopathic institution to any old-school college in a manner which involves the surrender of its distinctive name, and under conditions which do not secure the recognition of distinctive chairs of Homœopathy.—*Adopted June* 20, 1894.

12. *Resolved*, That the Committee on Legislation shall, as opportunity may offer, encourage, and promote legislation requiring that medical expert witnesses shall be appointed by the Courts, or other competent State authority outside of the medical profession, and paid by the county or State; provided, that in the choice of such witnesses the law and the appointing power shall not discriminate in favor of any particular school of medical practitioners.—*Adopted June* 2, 1898.

13. *Resolved*, That the duties of the Committee on Medical Education shall include an annual report in relation to the progress, the condition, and the needs of educational work in our medical colleges and training-schools for nurses.—*Adopted June* 2, 1898.

14. *Resolved*, That the Executive Committee of the American Institute of Homœopathy be the Committee of Arrangements, with a local auxiliary committee, in order that the officers of the Institute may control the important matters connected with the meeting.—*Adopted June* 2, 1898.

Complete Report of the Board of Censors.

PHYSICIANS ELECTED TO MEMBERSHIP.

ASHBY, SHERMAN F.....Fairmont, Neb.
Hahnemann Medical College, Chicago, 1885.

BARBEE, BENJAMIN IRVING.....60 E. Broad St., Columbus, O.
Pulte Medical College, 1880.

BIGGAR, HAMILTON FISK, JR .....Osborn Bldg., Cleveland, O.
Cleveland College of Physicians and Surgeons, 1896.

BILLINGS, ROBERT ANDERSON.....Ord, Neb.
Kansas City Homœopathic Medical College, 1893.

BOUTIN, FRANCIS J.....Independence, Md.
Hahnemann Medical College, Chicago, 1883.

BRADFORD, ELI.....636 18th St., Rock Island, Ill.
Chicago Homœopathic Medical College, 1886.

BROWN, ERNEST C.....Cor. 2d and State St., Madrid, Ia.
Michigan University Homœopathic Medical College, 1893.

BROWN, SAMUEL G. A.....60 E. Main St., Shippensburg, Pa.
Hahnemann Medical College, Philadelphia, 1892.

BROWN, STANLEY ROBERT.....287 North Broad St., Elizabeth, N. J.
New York Homœopathic Medical College and Hospital, 1895.

BUDLONG, MARTIN SALISBURY.....604 Westminster St., Providence, R. I.
Hahnemann Medical College, Philadelphia, 1895.

BURG, WILLIAM F.....404 California Bldg., Denver, Col.
Hahnemann Medical College, Chicago.

BUTTON, LUCIUS LUCINE.....45 So. Clinton St., Rochester, N. Y.
New York Homœopathic Medical College and Hospital, 1895.

CAMPBELL, SAMUEL M.....1326 S. 32d St., Omaha, Neb.
Hahnemann Medical College, Chicago, 1881.

CANNON, J. M. WILLSON.....Kidder, Mo.
Hahnemann Medical College, Philadelphia, 1878.

CARR, E. ARTHUR.....1205 O St., Lincoln, Neb.
Hahnemann Medical College, Chicago, 1897.

CATE, WILLIAM ANDREW.....Union Blk., Nelson, Neb.
Chicago Homœopathic Medical College, 1892.

CHANDLER, CHARLES DELONG.....1710 D St., Lincoln, Neb.
Hahnemann Medical College, Philadelphia, 1896.

CHRISTINE, GORDON MAXWELL.....2043 N. 12th St., Philadelphia, Pa.
University of Pennsylvania, 1880, and Hahnemann Medical College, Philadelphia, 1891.

COBB, SHERIDAN G.....1852 Marshall Ave., St. Paul, Minn.
Hahnemann Medical College, Chicago, 1884.

COLLESTER, JOSEPH CHARLES.....509 Main St., Spencer, Ia.
Chicago Homœopathic Medical College, 1891.

CONNELL, RALPH W.....1707 Dodge St., Omaha, Neb.
Pulte Medical College, 1882.

COONS, HENRY NEWTON.....96 E. Pearl St., Lebanon, Ind.
Hahnemann Medical College, Chicago, 1883.

CRAMER, WILLIAM E.....1103 Main St., Kansas City, Mo.
Hahnemann Medical College, Chicago, 1888.

CRAWFORD, JOHN MARTIN.....Auburn Ave., Cincinnati, O.
Pulte Medical College, 1879.

CUTLER, CHARLES EDWARD.....Magnolia, Ia.
Pulte Medical College, 1898.

DENNIE, GEORGE E.....2315 Portland Ave., Minneapolis, Minn.
Hahnemann Medical College, Chicago, 1883.

DITTMER, ERNEST G.....Manchester, Ia.
Chicago Homœopathic Medical College, 1895.

DORRIS, ALVAH H.....141 South 12th St., Lincoln, Neb.
Hahnemann Medical College, Chicago, 1875.

FLETCHER, CYRUS G.....North Yakima, Wash.
Pulte Medical College, 1881.

FLOWER, FRANK WARREN.....Carthage, Mo.
Hahnemann Medical College and Hospital, Chicago, 1876.

FORBES, WILLIAM O.....77 E. 39th St., Chicago, Ill.
Hahnemann Medical College and Hospital, Chicago, 1896.

GILSTRAP, H. PRESTON.....Washington, Kan.
Kansas City Homœopathic Medical College, 1896.

GOFF, SARAH A.....Cor. Harrison and 9th Sts., Cañon City, Colo.
Hahnemann Medical College, Chicago, 1886.

GORDON, ARTHUR HORACE.....268 La Salle Ave., Chicago, Ill.
Hahnemann Medical College, Chicago, 1887.

GREEN, JULIA MINERVA.....1738 N. St. N. W., Washington, D. C.
Boston University School of Medicine, 1898.

GREINER, FRANK WILLIAM.....Two Rivers, Wis.
Chicago Homœopathic Medical College, 1896.

GUNDELACH, WILLIAM JUSTUS.....3821 Finney Ave., St. Louis, Mo.
St. Louis Medical College, 1890, Medical Dept. University of Pennsylvania, 1891.

GURLEY, EBER WHITNEY.....39 Windermere St., East Cleveland, O.
Cleveland Homœopathic Medical College, 1898.

GWYNNE, EVAN EDMISTON.....566 Garfield Ave., Chicago, Ill.
Hahnemann Medical College, Chicago, 1879.

HALL, AMOS C.....1273 E. 75th St., Chicago, Ill.
Hahnemann Medical College, Chicago, 1889.

HALPHIDE, ALVAN CAVALA.....3458 Wabash Ave., Chicago, Ill.
Hahnemann Medical College, Chicago, 1893.

HANCOCK, AVERY C.....Hartington, Neb.
Kansas City Homœopathic Medical College, 1896.

HAYDEN, ARTHUR SUMNER.....Wall Lake, Ia.
State University, Iowa Hom. Dept., Iowa City, 1896.

HERMANN, JOHN.....701 Jackson St., Sioux City, Ia.
Chicago Homœopathic Medical College, 1889.

HILL, MARVIN JASPER.....507 Locust St., Sterling, Ill.
Chicago Homœopathic College, 1878.

HOWE, WARREN D.....831 Main St., Cañon City, Colo.
Chicago Homœopathic Medical College, 1895.

HUMPHREY, HOWARD M.....Lake City, Ia.
Homœopathic Dept., State University, Iowa, 1895.

HUNT, GEORGE HENRY.....Paris, Ill.
Pulte Medical College, 1882.

HURD, LAURA B.....745 Guererro St., San Francisco, Cal.
Hahnemann Hospital College, San Francisco, 1897.

JONES, MARY HOFFMAN.....Hyde Park Hotel, Chicago, Ill.
Hahnemann Medical College, Chicago, 1896.

KEHOE, HENRY C.....Flemingsburg, Ky.
Pulte Medical College, 1885.

LARKEQUE, GARRETT BANCROFT BRECKINRIDGE.....345 Main St., Athol, Mass.
Indiana College of Medicine, 1880; Cleveland University, 1893.

LEAKE, ENDELL N.....237 W. 6th St., Fremont, Neb.
New York Homœopathic Medical College and Hospital, 1880.

LOY, EDWARD N.....Cor. Franklin and Walnut Sts., Troy, O.
Chicago Homœopathic Medical College, 1898.

MACOMBER, ADDISON P.....Atlantic, Ia.
New York University Medical College, 1853.

MANN, EUGENE LANGDON.....681 Endicott St., St. Paul, Minn.
Hahnemann Medical College, Philadelphia, 1887.

MCCONNELL, CARL PHILIP.....West Salem, Wis.
National Medical College, 1898.

MERRYMAN, THOMAS J.....533 N. 27th St., Lincoln, Neb.
Hahnemann Medical College, Chicago, 1868, and New York Hom. Med. Col., 1869.

METCALF, FRANK ARNOLD.....47 Kenwood Ave., Chicago, Ill.
Hahnemann Medical College, Chicago, 1898.

MILLER, ROBERT P.....Greenfield, Ia.
Kansas City Homœopathic Medical College, 1896.

MINER, JAMES B.....Osage, Ia.
Hahnemann Medical College and Hospital, Chicago, 1894.

MITCHELL, JOHN A.....69 N. 3d St., Newark, O.
Cleveland Homœopathic Hospital College, 1880.

MOORHEAD, JAMES.....743 12th St., Marion, Ia.
State University of Iowa, 1893.

MORSE, BERTRAND O.....Atlantic, Ia.
Hahnemann Medical College, Philadelphia, 1895.

MORSE, LUCIUS B.....Cook Co. Hospital, Chicago, Ill.
Chicago Homœopathic Medical College, 1897.

MORTON, EDWARD CLARENCE.....2348 Champa St., Denver, Colo.
Denver Homœopathic Medical College, 1898.

OGDEN, BENJAMIN HARVEY.....Germain Bank Bldg., St. Paul, Minn.
Hahnemann Medical College, Philadelphia, 1885.

OWEN, MILTON G. ..... Lincoln, Ill.
Hahnemann Medical College, Chicago, 1894.

PAUL, IRVIN NATHANIEL ..... Perry, Ia.
Hahnemann Medical College, Chicago, 1885.

PECK, FERD. EDWARD ..... 114 S. Main St., Cynthiana, Ky.
South Western Homœopathic Medical College, Louisville, 1898.

PETERSON, ALFRED COOKMANN ..... 135 Geary St., San Francisco, Cal.
Hahnemann Medical College, Philadelphia, 1897.

PLIMPTON, WILLIAM MERRILL ..... Glenwood, Ia.
Chicago Homœopathic Medical College, 1896.

PRENTIS, PERCY L. ..... Delphos, Ia.
Cleveland Homœopathic Medical College, 1893.

QUINBY, STILLMAN JOSIAH ..... 318 S. 26th St., Omaha, Neb.
University Medical College, New York, 1860.

REID, JOHN MANLEY ..... Main St., Centerview, Mo.
Kansas City Homœopathic Medical College, 1897.

REMINGTON, FREDERICK A. ..... Sioux City, Ia.
State University of Iowa, Homœopathic Department, Iowa City, 1884.

SAWYER, EUGENE W. ..... Cor. State and Washington Sts., Chicago, Ill.
Hahnemann Homœopathic Medical College, 1882.

SCHOOR, EDWARD ..... Garden City, Mo.
Kansas City Homœopathic Medical College, 1891.

SCOTT, JAMES RANDOLPH ..... Malvern, Ia.
Hahnemann Medical College, Chicago, 1885.

SHERIDAN, WILLIAM M. ..... Florence, Colo.
Chicago Homœopathic Medical College, 1897.

SHOEMAKER, CHARLES A. ..... 503 S. 11th St., Lincoln, Neb.
State University of Nebraska, 1886.

SNYDER, MELANCTHON BRAHAM ..... 121 S. 7th St., Council Bluffs, Ia.
University of Michigan, Homœopathic Department, 1887.

SNYDER, SUSAN MCGLAUGHLIN ..... 121 S. 7th St., Council Bluffs, Ia.
University of Michigan, Homœopathic Department.

SPOONER, HENRY MINER ..... Fowler, Ind.
Chicago Homœopathic Medical College, 1895.

STEPHENSON, BENJAMIN SWIFT ..... 49 Kirk St., Lowell, Mass.
Boston University, School of Medicine, 1892.

SWEET, E. C. ..... 70 State St., Chicago, Ill.
American Eclectic College, 1870; Hahnemann Medical College, Chicago, 1884.

TAYLOR, EDWIN A. ..... 100 State St., Chicago, Ill.
Hering Medical College and Hospital, Chicago, 1895.

THOMASSON, JOHN CLAY ..... 214 Main St., Georgetown, Ky.
Pulte Medical College, Cincinnati, 1881.

WARING, GUERNSEY P. ..... 1106 Stewart Bldg., Chicago, Ill.
Dunham Medical College, Chicago, 1897.

WARNER, ALTON G. ..... 194 Schermerhorn St., Brooklyn, N. Y.
New York Homœopathic Medical College, 1883.

WHEELER, BYRON A. ..... 1441 Stout St., Denver, Colo.
Hahnemann Medical College, Chicago, 1867.

WHERRY, CURTIS A. ..... Marshall, Mo.
Kansas City Homœopathic Medical College, 1897.

WHITMORE, FRANK BEACH ..... 632 W. Congress St., Chicago, Ill.
National Medical College, Chicago, 1897; College of Physicians and Surgeons, Medical Department, University of Illinois, Chicago, 1898.

WILLIAMS, MARGARET COWAN ..... 2909 Portland Ave., Louisville, Ky.
South Western Homœopathic Medical College, Louisville, 1897.

WOODBURN, WILLIAM ..... 609 Walnut St., Des Moines, Ia.
Hahnemann Medical College and Hospital, Chicago, 1888.

WOODBURY, ERNEST I. ..... 212 N. 4th St., Burlington, Ia.
Chicago Homœopathic Medical College, 1894.

ZIEGENFUS, A. FRANK ..... 1124 Wallace St., Philadelphia, Pa.
Hahnemann Medical College, Philadelphia, 1879.

Register of Members in Attendance.

REPORTED BY HENRY C. ALDRICH, M.D., REGISTRAR.

Senior Members.

ALLEN, H. C.,	Chicago, Ill.
BAXTER, H. H.,	Cleveland, O.
BIGGER, H. F.,	Cleveland, O.
CURRIER, C. B.,	San Francisco, Cal.
CANFIELD, CORRESTA T.,	Chicago, Ill.
COMSTOCK, T. G.,	St. Louis, Mo.
COGGSWELL, C. H.,	Cedar Rapids, Ia.
DUNCAN, T. C.,	Chicago, Ill.
DUDLEY, PEMBERTON,	Philadelphia, Pa.
FOSTER, W. D.,	Kansas City, Mo.
FISHER, C. E.,	Chicago, Ill.
GORDON, G. A.,	Chillicothe, Mo.
HEDGES, S. P.,	Chicago, Ill.
HUTCHINS, H. S.,	Batavia, N. Y.
LUDLAM, REUBEN,	Chicago, Ill.
MCCLELLAND, J. H.,	Pittsburg, Pa.
MITCHELL, J. S.,	Chicago, Ill.
PAINE, H. M.,	West Newton, Mass.
PRICE, C. E.	Baltimore, Md.
RUNNELS, O. S.,	Indianapolis, Ind.
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Fisher, C. E.,	Chicago, Ill.
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Gordon, O. W.,	Council Bluffs, Ia.
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Hutchins, H. S.,	Batavia, N. Y.
Hedges, S. P.,	Chicago, Ill.
Holmes, H. P.,	Omaha, Neb.
Hanchett, W. H.,	Omaha, Neb.
Hanchett, J. L.,	Sioux City, Ia.
Hanchett, A. P.,	Council Bluffs, Ia.
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Helfrich, C. H.,	New York City.
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Honberger, F. H.,	Chicago, Ill.
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Huss, J. R.,	Eureka, Kan.
Hudley, May,	Chicago, Ill.
Hoffman, J. O.,	Orleans, Neb.
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Hancock, A. C.,	Harrington, Neb.
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KENYON, F. A.,	Kenosha, Wis.
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KENY, S. S.,	Denver, Col.
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LINN, L. S.,	Mt. Pleasant, Ia.
LINN, A. M.,	Des Moines, Ia.
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MANN, E L.,	St. Paul, Minn.
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MACCOMBER, A. P.,	Atlantic, Ia.
MOOREHEAD, JAS.,	Marion, Ind.
MONTGOMERY, P. J.,	Council Bluffs, Ia.
MARTIN, L. A.,	Binghamton, N. Y.
MARTIN, G. A.,	Boone, Ia.
MEYERS, A. J.,	Creston, Ia.
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MCLACHLAN, D. A.,	Detroit, Mich.
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MCDOWELL, GEO. F.,	New York City.
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MILLER, R. P.,	Greenfield, Ia.
MINER, H. S.,	Ft. Dodge, Ia.
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NORTHROP, E. S.,	Kansas City, Mo.
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PECK, F. C.,	Cynthiana, Ky.
PERKEY, L.,	Lincoln, Neb.
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SCHUMANN, C.,	Delhi, N. Y.
SNYDER, SUSAN M. G.,	Council Bluffs, Ia.
SNYDER, M. B.,	Council Bluffs, Ia.
SCOTT, J. R.,	Malvern, Ia.
STETLER, C. S.,	Chicago, Ill.
SOULE, I. C.,	Freeport, Ill.
SMITH, W. A.,	Chicago, Ill.
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STAFFORD, W. W.,	Chicago, Ill.
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THOMASSEN, J. C.,	Georgetown, Ky.
TEAL, F. F.,	Omaha, Neb.
VERGES, W. F.,	Norfolk, Neb.
VAN BAUN, W. W.,	Philadelphia, Pa.
VAN NORMAN, H. B.,	Cleveland, O.
VAN SCOYOC, L. G.,	Kansas City, Mo.
WINCHELL, W. B.,	Brooklyn, N. Y.
WHEELER, B. A.,	Denver, Col.
WORTHEN, L. J.,	Paola, Kan.
WILDER, C. V.,	Atlantic, Ia.
WOOD, J. C.,	Cleveland, O.
WORLEY, H. A.,	Omaha, Neb.
WOOD, O. S.,	Omaha, Neb.
WRIGHT, A. R.,	Buffalo, N. Y.
WATERS, M. H.,	Terre Haute, Ind.
WALTER, Z. D.,	Pueblo, Col.
WOODBURN, W.,	Des Moines, Ia.
WALTON, C. E.,	Cincinnati, O.
WILLIAMSON, A. P.,	Minneapolis, Minn.
WARD, J. W.,	San Francisco, Cal.

WILBERTON, L. G.,	Winona, Minn.
WESTOVER, H. W.,	St. Joseph, Mo.
WARING, G. P.,	Chicago, Ill.
WHERRY, C. A.,	Marshall, Mo.
WELLS, A. P.,	McCook, Neb.
WOODBERRY, ERNEST C.,	Burlington, Ia.
ZIEGENFUS,	Philadelphia, Pa.
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All members of the Institute who have maintained twenty-five consecutive years of membership shall be considered *Senior Members*, and be exempt from the payment of annual dues; and the names of such members shall be printed first in the list of members in capital letters.—*Article V., Section 6, of the By-Laws.*

There shall be published in each annual volume of the TRANSACTIONS: 1. A list of senior members arranged according to their years of membership. 2. An alphabetical list of members, including the names of senior members in CAPITALS. 3. A list of members classified by States. The list of deceased members shall be revised and republished annually. The complete list of members of the Institute from its organization and its Code of Ethics shall be published every five years.—*Article VIII., Section 4, of the By-Laws.*

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1846.

BERENS, JOSEPH, 1500 Green Street, Philadelphia, Pa.
RHEES, MORGAN J., Wheeling, W. Va.

1847.

CHASE, HIRAM L., 924 Massachusetts Avenue, Cambridgeport, Mass.
GUY, SAMUEL S., 2517 Parrish Street, Philadelphia, Pa.
SHACKFORD, RUFUS, Portland, Me.

1848.

GUERNSEY, EGBERT, "The Madrid," 180 W. 59th Street, New York, N. Y.
MARCY, ERASTUS E., 396 Fifth Avenue, New York, N. Y.
PALMER, MILES W., 235 E. 18th Street, New York, N. Y.
RAYMOND, JONAS C., 626 Thirteenth Street, Oakland. Cal.

1849.

RODMAN, WILLIAM V., New Haven, Conn.

1850.

PAINE, HORACE M., 67 N. Forsyth Street, Atlanta, Ga.

1852.

HAMMOND, MILTON, 310 N. Paca Street, Baltimore, Md.

1853.

ANGELL, HENRY C., 16 Beacon Street, Boston, Mass.
BISSEL, ARTHUR F., 157 Maiden Lane, New York, N. Y.
HELMUTH, WILLIAM TOD, 504 Fifth Avenue, New York, N. Y.
PAINE, JOSEPH P., Hotel Eliot, Roxbury, Mass.
SKILES, FRANCIS W., Suffolk, Va.
TALBOT, I. TISDALE, 685 Boylston Street, Boston, Mass.

1854.

BURGHER, JOHN C., 960 Penn Avenue, Pittsburg, Pa.
SISSON, EDWARD R., New Bedford, Mass.
WATSON, WILLIAM H., 270 Genesee Street, Utica, N. Y.

1855.

FINCKE, BERNHARDT, 122 Livingston Street, Brooklyn, N. Y.
WILDER, LOUIS DEV., 55 W. 33d Street, New York, N. Y.

1857.

BALDWIN, JARED G., 8 E. 41st Street, New York, N. Y.
BECKWITH, SETH R., East Orange, N. J.
HATCH, PHILO L., 1901 San Pascual Street, Santa Barbara, Cal.
LUDLAM, REUBEN, 1823 Michigan Ave., Chicago, Ill.

1858.

DETWILLER, JOHN J., Easton, Pa.
JONES, JOSEPH E., Westchester, Pa.
KELLOGG, EDWIN M., 115 E. 37th Street, New York, N. Y.
LOUGEE, WILLIAM H., Lawrence, Mass.
VERDI, TULLIO S., 11 Via delle Officine, Florence, Italy.
WEST, EDWIN, 155 W. 12th Street, New York, N. Y.

1859.

HOUGHTON, HENRY A., 136 Marlborough Street, Boston, Mass.
JAMES, BUSHROD W., cor. Green and 18th Streets, Philadelphia, Pa.
JEFFERDS, GEORGE P., Bangor, Me.
ORME, FRANCIS H., 70 N. Forsyth Street, Atlanta, Ga.
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SANDERS, OREEN S., 511 Columbus Avenue, Boston, Mass.
SHERMAN, JOHN H., 534 Broadway, Boston, Mass.
SPARHAWK, GEORGE E. E., Burlington, Vt.
WESSELHOEFT, CONRAD, 291 Boylston Street, Boston, Mass.
WESSELHOEFT, W. P., 176 Commonwealth Avenue, Boston, Mass.
WILSON, GROVE H., Meriden, Conn.

1860.

BRADFORD, F. STANDISH, 36 Maple Avenue, Morristown, N. J.
JOHNSON, ISAAC D., Kennett Square, Pa.
PAYNE, JAMES H., 344 Commonwealth Avenue, Boston, Mass.
SANDERS, JOHN C., 608 Prospect Street, Cleveland, O.
SMITH, HENRY M., 228 St. Nicholas Avenue, New York, N. Y.
SMITH, T. FRANKLIN, 264 Lenox Avenue, New York, N. Y.
WHITE, THEODORE C., 21 S. Clinton Street, Rochester, N. Y.
WOOD, ORLANDO S., 521 N. Y. L. Bldg., Omaha, Neb.

1865.

BECKWITH, D. H., 528 Prospect Street, Cleveland, O.
BOERICKE, FRANCIS E., Hammondsport, N. Y.
HALE, EDWIN M., 65 Twenty-second Street, Chicago, Ill.
HAYNES, J. R., 262 N. Illinois Street, Indianapolis, Ind.
KREBS, FRANCIS H., 42 Union Park, Boston, Mass.
OWENS, WILLIAM, cor. 7th and John Streets, Cincinnati, O.
RANKIN, JOHN S., cor. Roup and Howe Avenues, Pittsburg, Pa.
RUSH, R. B., 70 E. Main Street, Salem, O.
WILSON, T. P., 15 Archwood Ave., Cleveland O.

1866.

ALLEN, TIMOTHY FIELD, 3 E. 48th Street, New York, N. Y.
COGSWELL, C. H., 65 Second Avenue, Cedar Rapids, Ia.
COMSTOCK, T. GRISWOLD, 3401 Washington Avenue, St. Louis, Mo.
COOPER, J. F., 105 Arch Street, Allegheny City, Pa.
DAKE, B. F., 815 Penn Avenue, Pittsburg, Pa.
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MITCHELL, J. S., 2954 Prairie Avenue, Chicago, Ill.
ROBINSON, S. A., West New Brighton, N. Y.
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1867.

ALBERTSON, J. A., 119 Powell Street, San Francisco, Cal.
BAYLIES, B. L. B., 418 Putnam Avenue, Brooklyn, N. Y.
BELL, JAMES S., Rock Valley, Ia.
BROWN, EDWARD V., North Tarrytown, N. Y.
CURRIER, C. B., 921½ Geary Street, San Francisco, Cal.
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ERMENTRAUT, JOHN P., 261 E. 4th Street, New York, N. Y.
FELLOWS, H. BARTON, 2969 Indiana Avenue, Chicago, Ill.
FISKE, WM. M. L., 484 Bedford Avenue, Brooklyn, N. Y.
FOSTER, WM. D., 420 W. 11th Street, Kansas City, Mo.
GUMPERT, B. B., 840 Franklin Street, Philadelphia, Pa.
HILL, ROBERT L , 564 Fourteenth St., Oakland, Cal.

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HOUGHTON, HENRY C., 7 W. 39th Street, New York, N. Y.
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JONES, HENRY C., 1220 S. First Ave., Mount Vernon, N. Y.
KEEP, J. LESTER, 460 Clinton Avenue, Brooklyn, N. Y.
MCCLELLAND, J. H., cor. 5th and Wilkins Avenue, Pittsburgh, Pa.
MASON, S. R., Devall's Bluff, Ark.
MORGAN, JOHN C., Millville, N. J.
MORSE, NATHAN R., Salem, Mass.
NEGENDANK, AUGUSTUS, 1112 Washington Street, Wilmington, Del.
PAYNE, FREDERICK W., cor. Exeter and Boylston Streets, Boston, Mass.
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PHILLIPS, ALBERT W., Birmingham, Conn.
PRATT, LEONARD, 520 N. 2d Street, San José, Cal.
PRICE, ELIAS C., 1012 Madison Avenue, Baltimore, Md.
SANFORD, CHARLES E., Bridgeport, Conn.
SAWIN, ISAAC W., 582 Broadway, Providence, R. I.
SCALES, EDWARD P., Newton, Mass.
SHEARER, THOMAS, 345 N. Charles Street, Baltimore, Md.
THOMPSON, JOHN H., 36 E. 30th Street, New York, N. Y.
THOMPSON, VIRGIL, 56 W. 21st Street, New York, N. Y.
WESSELHOEFT, WALTER, 391 Harvard Street, Cambridge, Mass.
WILLARD, L. H., 236 Western Avenue, Allegheny, Pa.

1868.

BANCROFT, WALTON, Keokuk, Ia.
BARROWS, GEORGE S., Marion, Kan.
BAXTER, HARRIS H., 275 Prospect Street, Cleveland, O.
BELL, JAMES B., 178 Commonwealth Avenue, Boston, Mass.
BIGGAR, H. F., Cleveland, O.
BUDLONG, JOHN C., Providence, R. I.
FINCH, EDWIN W., Center Ave. and Prospect St., New Rochelle, N. Y.
HEDGES, S. P., 890 Evanston Avenue, Chicago, Ill.
MACFARLAN, MALCOLM, 1805 Chestnut Street, Philadelphia, Pa.

1869.

ARCULARIUS, PHILIP E., 104 W. 44th Street, New York, N. Y.
BISHOP, HERBERT M., 436 Bradbury Building, Los Angeles, Cal.
BLOSS, J. P., 45 Second Street, Troy, N. Y.
BOWEN, GEORGE W., 232 E. Washington Street, Fort Wayne, Ind.
BOWMAN, BENJAMIN, Chambersburg, Pa.
BRADFORD, THOMAS L., 1862 Frankford Avenue, Philadelphia, Pa.
BRIRY, MILTON S., Bath, Me.
BUCK, J. D., 124 W. 7th Street, Cincinnati, O.
COBURN, EDWARD S., 91 Fourth Street, Troy, N. Y.
COMPTON, J. AUGUSTINE, Indianapolis, Ind.
CROSS, HIRAM B., 21 Seavern's Avenue, Jamaica Plain, Boston, Mass.
CUTLER, WM. C., 10 Everett Avenue, Chelsea, Mass.

DeDerkey, F. F., 311 W. 3d Street, Los Angeles, Cal.
Dennis, Laban, 30 Central Avenue, Newark, N. J.
Dudley, Pemberton, 1405 N. 16th Street, Philadelphia, Pa.
Elliott, Joseph B., 493 Clinton Avenue, Brooklyn, N. Y.
Flanders, David P., Belfast, Me.
Gifford, Gilbert L., Hamilton, N. Y.
Gramm, Gustavus E., Ardmore, Pa.
Graves, S. P., Saco, Me.
Hayward, Joseph W., Taunton, Mass.
Holt, Edward B., Lowell, Mass.
Humphrey, Otis M., 100 E. 14th Street, Minneapolis, Minn.
Kinne, Theodore Y., Paterson, N. J.
Kittinger, Leonard, 724 King Street, Wilmington, Del.
McGeorge, Wallace, 521 Broadway, Camden, N. J.
Middleton, M. F., 423 Market Street, Camden, N. J.
Morse, Martin V. B., Marblehead, Mass.
Mossman, Nathan A., 28 E. 47th Street, New York, N. Y.
Sage, Wm. H., New Haven, Conn.
Seip, C. P., 636 Penn Avenue, Pittsburg, Pa.
Smith, J. Heber, 279 Dartmouth Street, Boston, Mass.
Smith, St. Clair, 25 W. 50th Street, New York, N. Y.
Spalding, Henry E., "The Cluny," Boston, Mass.
Streeter, John W., 2001 Prairie Avenue, Chicago, Ill.
Ware, William G., Dedham, Mass.
Woodward, A. M., 128 W. 13th Street, New York, N. Y.
Wright, A. R., 414 Elmwood Avenue, Buffalo, N. Y.

1870.

Bagley, H. B., Seattle, Washington.
Beebe, E. W., 173 Wisconsin Street, Milwaukee, Wis.
Betts, B. Frank, 1609 Girard Avenue, Philadelphia, Pa.
Boyer, Francis W., Pottsville, Pa.
Cheney, Benj. H., 45 Elm Street, New Haven, Conn
Gordon, George A., Chillicothe, Mo.
Grosvenor, Lemuel C., 185 Lincoln Avenue, Chicago, Ill.
Johnson, R. B., Ravenna, O.
King, Edward H., 906 Fifteenth Street, Denver, Col.
Kippax, John R., 3154 Indiana Avenue, Chicago, Ill.
Pennoyer, N. A., Kenosha, Wis.
Sheldon, J. W., 402 Warren Street, Syracuse, N. Y.
Van Norman, H. B., 289 Pearl Street, Cleveland, O.
Woodbury, William H., 22 Central Music Hall, Chicago, Ill.
Woodward, Alfred W., 130 Ashland Avenue, Chicago, Ill.
Worthington, Amos F., Fourth and Race Streets, Cincinnati, O.

1871.

Allen, Richard C., 4419 Frankford Avenue, Philadelphia, Pa.
Baldwin, Aaron, 1205 Eleventh Street, N. W., Washington, D. C.

BINGAMAN, C. F., 922 Penn Avenue, Pittsburg, Pa.
BOWIE, ALONZO P., 87 Main Street, Uniontown, Pa.
CHASE, MAURICE J., Galesburg, Ill.
CHURCH, CHARLES A., 128 Prospect Street, Passaic, N. J.
DRAKE, OLIN M., 70 Huntingdon Avenue, Boston, Mass.
EDMUNDSON, WALTER F., 375 Fifth Avenue, Pittsburg, Pa.
FAGER, CHARLES B., 120 Walnut Street, Harrisburg, Pa.
GREENLEAF, JOHN T., Owego, N. Y.
HIGBEE, ALBERT E., Masonic Temple, Minneapolis, Minn.
HIGBEE, CHESTER G., cor. 9th and Roberts Streets, St. Paul, Minn.
KNERR, CALVIN B., 1137 Spruce Street, Philadelphia, Pa.
LEWIS, HENRY M., 10 S. Portland Avenue, Brooklyn, N. Y.
MARTIN, CONSTANTINE H., Allentown, Pa.
MERCER, ROBERT P., 223 W. 3d Street, Chester, Pa.
MIDDLETON, CALEB S., 1523 Girard Avenue, Philadelphia, Pa.
MITCHELL, JOHN J., Newburgh, N. Y.
SARTAIN, HARRIET J., 212 W. Logan Square, Philadelphia, Pa.
SHIVERS, BOWMAN H., Haddonfield, N. J.
SOUTHWICK, AUGUSTUS B., 165 Dominic Street, Rome, N. Y.
STREETS, JACOB G., Bridgeton, N. J.

1872.

ALLEN, HENRY C., 5142 Washington Avenue, Chicago, Ill.
BENDER, PROSPER, Exeter Chambers, Boston, Mass.
BERGHAUS, ALEXANDER, 138 E. 65th Street, New York, N. Y.
DAKE, WILLIAM C., 218 N. Vine Street, Nashville, Tenn.
DOUGHTY, FRANCIS E., 512 Madison Avenue, New York, N. Y.
EDSON, SUSAN A., 1308 I Street, N. W., Washington, D. C.
HUTCHINS, H. S., Batavia, N. Y.
MORSE, LUCIUS D., P. O. Box 584, Atlanta, Ga.
OCKFORD, GEORGE M., 3 Oak Street, Ridgewood, N. J.
PETTENGILL, ELIZA F., 300 N. 10th Street, Philadelphia, Pa.
RICHARDSON, B. M., 151 Milton Street, Brooklyn, N. Y.
SCOTT, CHESTER W., Lawrence, Mass.
TALMAGE, JOHN F., 157 Joralemon Street, Brooklyn, N. Y.
WALTER, ZIBA D., 107 W. 7th Street, Pueblo, Col.
WARREN, JOHN K., 68 Pleasant Street, Worcester, Mass.
WILLIAMSON, MATHEW S., 1522 Arch Street, Philadelphia, Pa.
WORCESTER, SAMUEL, 31 Winter Street, Portland, Me.

1873.

ALLEN, GEORGE D., Portland, Me.
BREYFOGLE, W. A., New Albany, Ind.
BUFFUM, J. H., 34 Washington Street, Chicago, Ill.
BUTLER, WILLIAM M., 507 Clinton Avenue, Brooklyn, N. Y.
CANFIELD, CORRESTA T., 269 Lincoln Street, Chicago, Ill.
FISHER, A. LEROY, 315 Pigeon Street, Elkhardt, Ind.
FISHER, CHARLES E., 31 Washington Street, Chicago, Ill.

HITCHCOCK, DEXTER, Norwalk, Conn.
JENNY, WILLIAM H., Broadway and 12th Street, Kansas City, Mo.
JONES, GAIUS J., 5 Rockwell Street, Cleveland O.
LUKENS, M. B., 161½ Edgewood Avenue, Atlanta, Ga.
McDERMOTT, GEORGE C., Odd Fellows' Temple, Cincinnati, O.
MORRILL, EDWIN C., Norwalk, O.
PATCHEN, GEORGE H., 11 E. 59th Street, New York, N. Y.
RUNNELLS, O. S., 600 N. Meridian Street, Indianapolis, Ind.
SMITH, C., Portland, Mich.
VAN NORMAN, E. V., Los Angeles, Cal.
WARREN, ANNA H., 817 Bond Street, Dennison, Tex.
WATERS, MOSES H., 126 N. Seventh Street, Terre Haute, Ind
WILSON, M. T., 1170 Market Street, San Francisco, Cal.

Alphabetical List of Members.

The figures placed before the names indicate the date of membership. Names in SMALL CAPITALS are "Senior Members."

☞ Members are requested to inform the General Secretary of any change in their addresses. Those residing in a city are requested to furnish him with their *street* addresses.

Article V., Section 4, of the By-Laws.

Members neglecting the payment of dues for three years, after proper notification from the Treasurer, shall have their names dropped from the roll of membership.

1894. Abbott, Charles Sewell, 130 Huntington Avenue, Boston, Mass.
1896. Ackerman, James F., 905 Grand Avenue, Asbury Park, N. J.
1896. Adams, Charles, Central Music Hall, Chicago, Ill.
1895. Adams, G. Francis, Gowanda, N. Y.
1887. Adams, George Smith, Westboro, Mass.
1895. Adams, H. Alden, 21 W. Ohio Street, Indianapolis, Ind.
1876. Adams, Reuben A., 46 North Fitzhugh Street, Rochester, N. Y.
1892. Aiken, John Gayle, 1102 St. Charles Avenue, New Orleans, La.
1897. Albertson, Charles S., 358 Richmond Avenue, Buffalo, N. Y.
1867. ALBERTSON, J. A., 119 Powell Street, San Francisco, Cal.
1888. Aldrich, Henry C., 313 Medical Block, Minneapolis, Minn.
1894. Alexander, Ernest L., 1204 N. 24th Street, Omaha, Neb.
1895. Allard, Frank Ellsworth, 39 Hancock Street, Boston, Mass.
1881. Allen, Albion H., New London, Conn.
1897. Allen, George, Gowanda, N. Y.
1873. ALLEN, GEORGE D., Portland, Mich.
1872. ALLEN, HENRY C., 5142 Washington Avenue, Chicago, Ill.
1897. Allen, John V., 4637 Frankford Avenue, Philadelphia, Pa.
1887. Allen, Lamson, Worcester, Mass.
1891. Allen, Paul, 3 E. 48th Street, New York, N. Y.
1871. ALLEN, RICHARD C., 4419 Frankford Avenue, Philadelphia, Pa.
1892. Allen, Sara J., Charlotte, Mich.
1866. ALLEN, TIMOTHY FIELD, 3 E. 48th Street, New York, N. Y.
1895. Allison, George Freeman, Warren Avenue, East Providence, R. I.
1894. Ames, Charles S., Ada, O.
1893. Anderson, G. Hamlin, Seneca, Kan.
1896. Anderson, Jeremiah N., 5 College Street, Toronto, Ont.
1893. Anderson, John Wylie, 16 and 17 Steele Block, Denver, Col.
1890. Andrews, Sarah W., 319 Bowen Avenue, Chicago, Ill.
1892. Andrews, William R., Rockville, Md.
1853. ANGELL, HENRY C., 16 Beacon Street, Boston, Mass.
1891. Applegate, G. T., 25 Livingstone Avenue, New Brunswick, N. J.
1869. ARCULARIUS, PHILIP E., 104 W. 44th Street, New York, N. Y.

1890. Arnulphy, Bernard S., 5223 Jefferson Avenue, Hyde Park, Chicago, Ill.
1897. Arp, August H., Moline, Ill.
1891. Arschagouni, John, 743 Lexington Avenue, New York, N. Y.
1897. Arthur, Daniel H., Gowanda, N. Y.
1891. Artz, Jerome L., Cramer Hill, N. J.
1898. Ashley, Sherman, Fairmont, Neb.
1894. Austin, Edson C., Elkhorn, Wis.
1894. Avery, Aaron B., Pontiac, Mich.
1897. Ayler, Amos E., National Hom. Hospital, Washington, D. C.
1894. Ayres, Emma F. Macomber, 69 Caroline Street, Saratoga, N. Y.
1896. Ayres, James N., 534 S. Burdick Street, Kalamazoo, Mich.

1891. Babbitt, Zeno B., 810 11th Street, N. W., Washington, D. C.
1897. Babcock, Archibald H., Randolph, N. Y.
1885. Babcock, D. A., Fall River, Mass.
1892. Babcock, Francis Lester, 15 Walnut Street, Dedham, Mass.
1896. Babington, John, Corunna, Mich.
1874. Baethig, Henry, 350 Pennsylvania Street, Buffalo, N. Y.
1870. Bagley, H. B., Seattle, Wash.
1892. Baier, George Frederick, Norwood, Pa.
1893. Bailey, Alfred Goodrich.
1887. Bailey, Alfred W., 1809 Pacific Avenue, Atlantic City, N. J.
1888. Bailey, Benjamin F., Lincoln, Neb.
1889. Bailey, E. Stillman, 3034 Michigan Avenue, Chicago, Ill.
1893. Bailey, William M., 29 Miami Avenue, Detroit, Mich.
1894. Baker, Jennie Van Holland, 512 Bedford Avenue, Brooklyn, N. Y.
1896. Baldinger, Arthur F., 670 Euclid Avenue, Cleveland, O.
1871. Baldwin, Aaron, 1205 11th Street, N. W., Washington, D. C.
1892. Baldwin, Henry D., Elyria, O.
1857. Baldwin, Jared G., 8 E. 41st Street, New York, N. Y.
1892. Ballard, Asa N., 2020 Third Avenue, Birmingham, Ala.
1883. Ballard, Laura A. S., 610 Hyde Street, San Francisco, Cal.
1892. Balyeat, Edmond A., 122 W. Main Street, Kalamazoo, Mich.
1868. Bancroft, Walton, Keokuk, Iowa.
1888. Barber, Oscar M., Mystic Bridge, Conn.
1898. Barbee, Benj. Irving, 60 E. Broad Street, Columbus, O.
1881. Barker, Clarence F., Ellis Avenue and Oakwood Boulevard, Chicago, Ill.
1891. Barnard, Charles A., Centerdale, R. I.
1891. Barnard, James S., 2112 N. Charles Street, Baltimore, Md.
1897. Barnes, Frank H., Summer Street, Stamford, Conn.
1894. Barnhill, Tobias G., 208 S. Main Street, Findlay, O.
1892. Barrett, James Willis, Osage, Iowa.
1868. Barrows, George S., Marion, Kan.
1892. Barstow, Benjamin Parker, Kingston, Mass.
1896. Bartholomew, Daniel D., Holly, Mich.
1886. Bartlett, Clarence, 1506 Arch Street, Philadelphia, Pa.
1892. Barton, J. Marcus, Worcester, Mass.
1896. Barton, William R., 216 Washington Street, Ypsilanti, Mich.
1889. Bascom, Henry M., 727 Columbus Street, Ottawa, Ill.
1880. Bassett, John S., 11 W. 31st Street, New York, N. Y.

1892. Batchelder, Frederick P., 232 Massachusetts Avenue, Boston, Mass.
1892. Batchelder, Henry F., 18 Locust Street, Danvers, Mass.
1868. Baxter, Harris H., 275 Prospect Street, Cleveland, O.
1891. Bayley, Weston D., 1434 Poplar Street, Philadelphia, Pa.
1867. Baylies, B. L. B., 418 Putnam Avenue, Brooklyn, N. Y.
1896. Beaman, Charles P., Ithaca, N. Y.
1889. Becker, Frederick, Clermont, Ia.
1888. Becker, Frederick J., Postville, Iowa.
1865. Beckwith, D. H., 528 Prospect Street, Cleveland, O.
1857. Beckwith, Seth R., East Orange, N. J.
1877. Beebe, Clarence E., 62 W. 37th Street, New York, N. Y.
1870. Beebe, E. W., 173 Wisconsin Street, Milwaukee, Wis.
1876. Beebe, Henry E., Sidney, O.
1892. Belden, Charles K., 28 Clinton Avenue, Jamaica, N. Y.
1868. Bell, James B., 178 Commonwealth Avenue, Boston, Mass.
1867. Bell, James S., 2200 Congress Street, Chicago, Ill.
1877. Bellows, Howard P., cor. Boylston and Berkeley Sts., Boston, Mass.
1872. Bender, Prosper, Exeter Chambers, Boston, Mass.
1881. Bennett, James A., 4 Irving Place, New York, N. Y.
1897. Bennett, John Hillman, 142 High Street, Pawtucket, R. I.
1889. Bennett, William Henry, Fitchburg, Mass.
1888. Bennitt, Francis M., 120 Sumner Avenue, Springfield, Mass.
1846. Berens, Joseph, 1500 Green Street, Philadelphia, Pa.
1872. Berghaus, Alex., 138 E. 65th Street, New York, N. Y.
1892. Bergman, Nils, Dwight, Ill.
1893. Bernard, Charles C., 954 N. Halstead Street, Chicago, Ill.
1897. Besemer, Howard Burhause, Osborn Block, Ithaca, N. Y.
1893. Besemer, Martin, 6 W. State Street, Ithaca, N. Y.
1890. Best, George B., Englewood, N. J.
1870. Betts, B. Frank, 1609 Girard Avenue, Philadelphia, Pa.
1874. Biegler, Joseph A., 58 S. Clinton Street, Rochester, N. Y.
1887. Bier, Peter A., 4200 Butler Street, Pittsburg, Pa.
1868. Biggar, Hamilton F., Cleveland, O.
1876. Bigler, William H., 118 N. Seventeenth Street, Philadelphia, Pa.
1898. Billings, Robt. Anderson, Ord, Neb.
1871. Bingaman, C. F., 922 Penn Avenue, Pittsburg, Pa.
1892. Bingham, Russell, 62 Day Street, Fitchburg, Mass.
1895. Birch, Charles E., White Plains, N. Y.
1881. Birdsall, Stephen T., Glens Falls, N. Y.
1895. Birdsall, Thomas P., Paterson, N. Y.
1897. Bishop, Frank A., 509 Broadway, Hannibal, Mo.
1869. Bishop, Herbert M., 436 Bradbury Building, Los Angeles, Cal.
1891. Bishop, William H., 46 W. 48th Street, New York, N. Y.
1853. Bissel, Arthur F., 157 Maiden Lane, New York, N. Y.
1893. Bissell, Elmer Jefferson, 75 S. Fitzhugh Street, Rochester, N. Y.
1891. Bittinger, Frank D., 23 W. 4th Street, Dayton, O.
1893. Blackman, George Edwin, Vernon, Tex.
1891. Blackman, Orville B., Dixon, Ill.
1893. Blackwood, Alexander L., 9151 Commercial Avenue, Chicago, Ill.
1894. Blair, William Wightmann, 406 Penn Avenue, Pittsburg, Pa.
1896. Blanke, Theodore F., 3333 South Jefferson Avenue., St. Louis, Mo.

1893. Bliem, Milton J., 425 Navarro Street, San Antonio, Tex.
1887. Blodgett, S. H., Mass.
1869. Bloss, J. P., 45 Second Street, Troy, N. Y.
1894. Blouke, Milton Baker, 1222 W. Washington Street, Chicago, Ill.
1894. Blunt, Arthur W., 323 Fifth Avenue, Clinton, Ia.
1893. Boardman, E. W., 115 Central Avenue, Parsons, Kan.
1897. Bodenbender, Edward G., 660 Walden Avenue, Buffalo, N. Y.
1895. Boericke, Felix A., 1011 Arch Street, Philadelphia, Pa.
1865. Boericke, F. E., 6386 Drexel Road, Philadelphia, Pa.
1883. Boericke, William, 1812 Washington Street, San Francisco, Cal.
1892. Boileau, John D., 804 Lehigh Avenue, Philadelphia, Pa.
1897. Bond, Aaron John, 1 Center Street, Adams, Mass.
1874. Bond, Mary E., 122 Lexington Avenue, New York, N. Y.
1891. Boocock, Robert, 965 Flatbush Avenue, Brooklyn, N. Y.
1897. Boone, George H., 307 Washington Street, Pottsville, Pa.
1869. Boothby, Alonzo, 1061 Beacon Street, Brookline, Mass.
1890. Bothfeld, James F., 455 Centre Street, Newton, Mass.
1898. Boutin, Francis J., Independence, Md.
1896. Bowen, Emma Klein, 156 St. Aubin Avenue, Detroit, Mich.
1869. Bowen, George W., 232 E. Washington Street, Fort Wayne, Ind.
1871. Bowie, Alonzo P., 87 Main Street, Uniontown, Pa.
1869. Bowman, Benjamin, Chambersburg, Pa.
1889. Bowman, Frederick C., 203 Second Avenue, W. Duluth, Minn.
1896. Bowman, Isaac N., Upper Sandusky, O.
1870. Boyer, Francis W., Pottsville, Pa.
1895. Boyd, Herbert D., 370 Columbus Avenue, Boston, Mass.
1874. Boynton, Frank H., 36 W. 50th Street, New York, N. Y.
1894. Brace, Charles C., 1427 Stout Street, Denver, Col.
1860. Bradford, F. Standish, 36 Maple Avenue, Morristown, N. J.
1869. Bradford, Thomas L., 1862 Frankford Avenue, Philadelphia, Pa.
1898. Bradford, Eli, 636, 18th Street, Rock Island, Ill.
1897. Bragdon, Merritt Caldwell, 1709 Chicago Avenue, Evanston, Ill.
1891. Brannin, John W., Mount Holly, N. J.
1895. Branson, J. H., 1231 New Jersey Avenue, N. W., Washington, D. C.
1891. Branson, Mary, 1719 Arch Street, Philadelphia, Pa.
1877. Branstrup, William T., 222 W. 6th Street, Topeka, Kan.
1895. Bray, Amanda C., 4 Wellington Street, Worcester, Mass.
1889. Bray, Nicholas, 1140 Main Street, Dubuque, Ia.
1891. Brewster, Cora B., 1027 Madison Avenue, Baltimore, Md.
1891. Brewster, Flora A., 1221 Madison Avenue, Baltimore, Md.
1896. Brewster, Frederick D., 330 Washington Avenue, Scranton, Pa.
1873. Breyfogle, W. L., New Albany, Ind.
1890. Brickley, Laura C., Chase and Hamilton Avenues, Cincinnati, O.
1893. Briggs, Joseph Emmons, 204 Huntington Avenue, Boston, Mass.
1889. Briggs, Warren S., St. Paul, Minn.
1893. Brigham, Homer C., 27 Morris Avenue, Grand Rapids, Mich.
1869. Briry, Milton S., Bath, Me.
1892. Brooks, Caroline Frances, Independence, Ia.
1894. Brooks, Ida Josephine, 219 E. 10th Street, Little Rock, Ark.
1893. Brooks, William F., Florence, Col.
1898. Brown, Ernest C., corner 2d and State Streets, Madrid, Iowa.

1876. Brown, Asa W., 27 Burnett Street, Providence, R. I.
1891. Brown, Christian H., 1824 Diamond Street, Philadelphia, Pa.
1890. Brown, Dagmar M., Waupaca, Wis.
1867. BROWN, EDWARD V., North Tarrytown, N. Y.
1893. Brown, Eugene A., 121 E. Washington Avenue, Madison, Wis.
1892. Brown, Lucy Henrietta Alice, 274 Broad Street, Providence, R. I.
1891. Brown, M. Belle, 135 W. 34th Street, New York, N. Y.
1896. Brown, Plumb, Jr., 503 State Street, Springfield, Mass.
1898. Brown, Samuel G. A., 60 East Maine Street, Shippensburg, Pa.
1898. Brown, Stanley R., 287 N. Broad Street, Elizabeth, N. J.
1892. Brown, William K., 1311 N. Broad Street, Philadelphia, Pa.
1897. Brownell, De Ette, The Westborough Insane Hospital, Westborough, Mass.
1893. Bruce, Ida F., Irvington, N. J.
1888. Bruce, Orpha D. B., 1302 Florida Avenue, Tampa, Fla.
1894. Bryan, Joseph Harter, 221 Asbury Avenue, Asbury Park, N. J.
1895. Bryan, Joseph Temple, 120 W. Chestnut St., Louisville, Ky.
1895. Bryant, Edgar Reeve, 317 Powell Street, San Francisco, Cal.
1894. Bryant, William Cullen, 64 Greene Avenue, Brooklyn, N. Y.
1869. BUCK, J. D., 124 W. 7th Street, Cincinnati, O.
1868. BUDLONG, JOHN C., Providence, R. I.
1898. Budlong, Martin Salisbury, 604 Westminster Street, Providence, R. I.
1873. BUFFUM, JOSEPH H., 34 Washington Street, Chicago, Ill.
1892. Bull, William H. H., Elmhurst, Pa.
1887. Bullard, J. Arthur, Wilkesbarre, Pa.
1895. Burck, Lewis A., 17 E. 2d Street, Frederick, Md.
1898. Burg, Wm. F., 404 California Building, Denver, Col.
1854. BURGHER, JOHN C., 960 Penn Avenue, Pittsburg, Pa.
1891. Burling, J., Summit, N. J.
1889. Burnham, Norman G., Denver, Col.
1889. Burns, Judson D., Grundy Centre, Ia.
1893. Burr, William Alton, 2010 Welton Street, Denver, Col.
1886. Burritt, Alice, 1129 Fourteenth Street, Washington, D. C.
1883. Burroughs, Amelia, 480 Boylston Street, Boston, Mass.
1875. Butler, Clarence W., 35 Fullerton Avenue, S. Montclair, N. J.
1873. BUTLER, WILLIAM M., 507 Clinton Avenue, Brooklyn, N. Y.
1898. Button, Lucius Lucine, 45 So. Clinton Street, Rochester, N. Y.

1892. Cahill, Eliza B., N. E. Conservatory of Music, Boston, Mass.
1895. Calderwood, Samuel Herbert, 2512 Washington Street, Boston, Mass.
1897. Calhoun, John Charles, 75 Arch Street, Allegheny, Pa.
1892. Cameron, Malcolm, 1027 Twenty-second Street, N. W., Washington, D. C.
1894. Campbell Eugene, Rooms 627-629, Laughlin Bldg., 315 S. Broadway, Los Angeles, Cal.
1876. Campbell, James A., 1729 Washington Avenue, St. Louis, Mo.
1874. Campbell, Merritt B., Patton, Cal.
1895. Campbell, Robert Alexander, Ontario, Cal.
1898. Campbell, Samuel M., 1326 So. 32d Street, Omaha, Neb.
1886. Candee, J. Willis, 402 Warren Street, Syracuse, N. Y.
1873. CANFIELD, CORRESTA T., 269 Lincoln Avenue, Chicago, Ill.

1894. Canney, Frederick G., 606 Sutter Street, San Francisco, Cal.
1898. Cannon, J. M. Willson, Kidder, Mo.
1896. Carleton, Bukk G., 75 W. 50th Street, New York, N. Y.
1889. Carlson, Oscar W., 425 Milwaukee Street, Milwaukee, Wis.
1883. Carmichael, John H., 41 Maple Street, Springfield, Mass.
1891. Carmichael, Thos. H., 7127 Germantown Ave., Germantown, Phila, Pa.
1896. Caron, George G., 30 Henry Street, Detroit, Mich.
1892. Carpenter, Willard B., 657 N. High Street, Columbus, O.
1891. Carr, Ada, 125 Vreeland Avenue, Paterson, N. J.
1898. Carr, E. Arthur, 1205 O Street, Lincoln, Neb.
1897. Carter, Rolla Bert, 106 Adolph Avenue, Akron, O.
1882. Carvill, Alphonso H., Somerville, Mass.
1881. Case, Erastus E., 109 Ann Street, Hartford, Conn.
1898. Cate, Wm. Andrew, Union Blk., Nelson, Neb.
1895. Chace, Nathaniel Ray, 89 Touro Street, Newport, R. I.
1897. Chadwick, John Gartside, 90 Cottage Street, Buffalo, N. Y.
1891. Chalmers, Robert, 47 Pleasant Street, Woburn, Mass.
1889. Chamberlin, Myron H., Monrovia, Cal.
1895. Champlin, Henry William, 37 West Main Street, Bloomsburg, Pa.
1891. Chandlee, Henry, 704 W. North Avenue, Baltimore, Md.
1898. Chandler, Chas. De Long, 710 D Street, Lincoln, Neb.
1891. Chapin, Edward, 21 Schermerhorn Street, Brooklyn, N. Y.
1890. Chapman, Edward E. K., Defiance, O.
1875. Chapman, Millie J., 804 Penn Avenue, Pittsburg, Pa.
1876. Chase, Herbert A., 950 Massachusetts Avenue, Cambridgeport, Mass.
1847. Chase, Hiram L., 924 Massachusetts Avenue, Cambridgeport, Mass.
1895. Chase, Joseph, Jr., East Weymouth, Mass.
1871. Chase, Maurice J., Galesburg, Ill.
1894. Chase, Theodore Livingstone, 1687 N. 54th Street, Philadelphia, Pa.
1870. Cheney, Benj. H., 45 Elm Street, New Haven, Conn.
1895. Childs, Helen S., 454 Centre Street, Jamaica Plain, Boston, Mass.
1890. Chislett, Howard Roy, 3030 Michigan Avenue, Chicago, Ill.
1891. Choate, Rufus, 3267 O Street, Washington, D. C.
1898. Christine, Gordon Maxwell, 2043 N. 12th Street, Philadelphia, Pa.
1891. Church, Adaline B., 102 Huntingdon Avenue, Boston, Mass.
1871. Church, Charles A., 128 Prospect Street, Passaic, N. J.
1896. Church, Eloise I., 41 W. 94th Street, New York, N. Y.
1897. Church, Herbert A., 601 Warren Street, Syracuse, N. Y.
1882. Church, Thomas T., 70 E. Main Street, Salem, O.
1881. Clapp, James Wilkinson, c. St. Paul and Francis Sts., Brookline, Mass.
1896. Clapp, Katherine B., 6222 Woodlawn Avenue, Chicago, Ill.
1886. Clark, Byron G., 162 W. 122d Street, New York, N. Y.
1891. Clark, Charles W., 21 Princess Street, Winnipeg, Manitoba.
1891. Clark, Edwin J., Longmont, Col.
1891. Clark, Ernest A., Ann Arbor, Mich.
1896. Clark, George E., 203 S. Main Street, Stillwater, Minn.
1897. Clark, George F., Aylmer, Elgin Co., Ont.
1887. Clark, Lyman A., Cambridge, N. Y.
1893. Clark, Whitman E., Three Rivers, Mich.
1894. Clarke, Harvey L., Fairbury, Neb.
1888. Clarke, Henry L., Wellesley Hills, Mass.

1895. Clarke, Mortimer Hall, 221 Auburn Street, Auburndale, Mass.
1887. Claypool, Albert, Toledo, O.
1893. Clokey, Allison A., 2d and Chestnut Streets, Louisville, Ky.
1888. Closson, James H., 53 W. Chelten Avenue, Germantown, Phila., Pa.
1890. Cobb, Joseph P., 254 E. 47th Street, Chicago, Ill.
1898. Colb, Sheridan G., 1852 Marshall Avenue, St. Paul, Minn.
1869. Coburn, Edward S., 91 Fourth Street, Troy, N. Y.
1893. Cocke, James R., 24 Marlborough Street, Boston, Mass.
1895. Coffin, John Lambert, 229 Berkeley Street, Boston, Mass.
1866. Cogswell, C. H., 65 Second Avenue, Cedar Rapids, Ia.
1886. Colby, Edwin A., Gardner, Mass.
1890. Colby, Edward P., 845 Boylston Street, Boston, Mass.
1890. Cole, Beder A., West Lima, Wis.
1883. Cole, Directus De Forest, Batavia, N. Y.
1883. Cole, Ezra Z., 1516 Mount Royal Avenue, Baltimore, Md.
1896. Cole, Sarah A., Lincoln, Kan.
1895. Coleman, E. B., Centre Street, Nantucket, Mass.
1892. Colgrove, Charles H., Willimantic, Conn.
1898. Collester, Joseph Chas., 509 Main Street, Spencer, Ia.
1896. Collins, Newton M., 43 East Avenue, Rochester, N. Y.
1895. Colvin, Harvey E., 150 Cherry Street, Burlington, Vt.
1894. Colwell, Charles Estabrook, 23 S. Lake Street, Aurora, Ill.
1869. Compton, J. Augustine, Indianapolis, Ind.
1866. Comstock, T. G., 3401 Washington Avenue, St. Louis, Mo.
1876. Conant, Thomas, Gloucester, Mass.
1894. Conklin, Frances C. Donovan, New Brighton, N. Y.
1895. Connett, George Cramer, 45 Washington Street, Morristown, N. J.
1898. Connell, Ralph W., 1707 Dodge Street, Omaha, Neb.
1881. Cook, Joseph T., 636 Delaware Avenue, Buffalo, N. Y.
1892. Cooke, Mary A., 2113 N. 18th Street, Philadelphia, Pa.
1886. Cooke, Persifor Marsden, 1290 Race Street, Denver, Col.
1897. Cooley, Justus H., 122 Westervelt Avenue, Plainfield, N. J.
1891. Coolidge, John W., 334 Washington Avenue, Scranton, Pa.
1893. Coombs, James T., Fulton, Mo.
1895. Coon, George S., 617 Fourth Street, Louisville, Ky.
1898. Coons, Henry Newton, 96 East Pearl Street, Lebanon, Ind.
1866. Cooper, J. F., 105 Arch Street, Allegheny City, Pa.
1894. Cooper, William Henry, P. O. Box 140, Oakmont, Pa.
1892. Copeland, Roy S., 46 Catherine Street, Ann Arbor, Mich.
1874. Corbin, John L., 245 Main Street, Athens, Pa.
1888. Cornell, Albert B., Kalamazoo, Mich.
1894. Cort, Lottie A., 89 Division Avenue, Brooklyn, N. Y.
1892. Costain, Thomas E., Pratt Sanitarium, Chicago, Ill.
1877. Couch, Asa S., Fredonia, N. Y.
1876. Couch, Louis B., Nyack, N. Y.
1894. Couden, William Chase, 29 Eighteenth Avenue, Denver, Col.
1890. Coutant, George F., La Salle, Ill.
1892. Cowell, Joseph H., 301 South Warren Avenue, Saginaw, Mich.
1875. Cowperthwaite, Allen C., 717 Marshall Field Bldg., Chicago, Ill.
1897. Cowperthwaite, Joseph Erving, 9, 10, 11 Owsley Block, Butte, Mont.
1894. Cox, Edward Gilbert, 109 State Street, Albany, N. Y.

1894. Cox, Frederick Joseph, 109 State Street, Albany, N. Y.
1895. Cox, George A., 80 S. Swan Street, Albany, N. Y.
1898. Cramer, Wm. E., 1103 Main Street, Kansas City, Mo.
1878. Cranch, Edward, Erie, Pa.
1874. Crank, C. D., 106 Auburn Avenue, Cincinnati, O.
1883. Crawford, Alex. K., 100 State Street, Chicago, Ill.
1893. Crawford, Joanna D., 3016 Bloomington Avenue, Minneapolis, Minn.
1892. Crawford, Katherine M., 131 N. Main Street, Chambersburg, Pa.
1898. Crawford, John Martin, Auburn Avenue, Cincinnati, O.
1896. Crisand, Carl, 2 Charlotte Street, Worcester, Mass.
1893. Crismore, J. M., Helena, O.
1895. Crocker, Harry Clinton, Common Street, Providence, R. I.
1885. Crosby, George W., 716 Atlantic Avenue, Atlantic City, N. J.
1869. Cross, Hiram B., 21 Seavern's Avenue, Jamaica Plain, Boston, Mass.
1896. Crum, J. D., 314 N. Ball Street, Owosso, Mich.
1894. Crumrine, Charles G., 1444-1445 Majestic Building, Detroit, Mich.
1895. Crump, Walter Gray, 693 Madison Avenue, New York, N. Y.
1893. Crutcher, Howard, Columbus Memorial Building, Chicago, Ill.
1886. Culver, Jane Kendrick, 13 Arlington Street, Boston, Mass.
1881. Cummings, M. Louisa, 178a Tremont Street, Boston, Mass.
1892. Curran, Edwin J., Oil City, Pa.
1867. Currier, Christopher B., 921½ Geary Street, San Francisco, Cal.
1897. Curtis, Harry N., 314 Second Street, Marietta, O.
1894. Cushman, Mary Floyd, Main Street, Castina, Me.
1867. Cushing, Alvin M., 175 State Street, Springfield, Mass.
1889. Custis, George W. N., 112 E. Capitol Street, Washington, D. C.
1879. Custis, J. B. Gregg, 912, 15th Street, N. W., Washington, D. C.
1892. Custis, Marvin A., 634 E. Capitol Street, Washington, D. C.
1869. Cutler, William C., 10 Everett Avenue, Chelsea, Mass.
1898. Cutler, Charles Edward, Magnolia, Iowa.

1891. Daily, John C., 117 E. Jefferson Street, Fort Smith, Ark.
1887. Dake, Addie B. (Crowley), 117 E. Jefferson Street, Syracuse, N. Y.
1866. Dake, B. F., 815 Penn Avenue, Pittsburg, Pa.
1881. Dake, Charles, Hot Springs, Ark.
1887. Dake, Frank B., Hot Springs, Ark.
1877. Dake, Walter M., 218 N. Vine Street, Nashville, Tenn.
1872. Dake, William C., 218 N. Vine Street, Nashville, Tenn.
1895. Damon, Newcomb Lincoln, 405 Washington Street, Dorchester, Mass.
1879. Danforth, L. L., 35 W. 51st Street, New York, N. Y.
1892. Darby, Edward A., Northampton, Mass.
1892. Darby, Margaret G., Northampton, Mass.
1875. Davis, Fielding L., 209 Locust Street, Evansville, Ind.
1894. Davis, Franklin S., 201 Perry Avenue, Peoria, Ill.
1878. Davis, John E. L., 743 Madison Avenue, New York, N. Y.
1892. Davis, John Jefferson, 504 Monument Square, Racine, Wis.
1894. Davison, William M. W., 1333 W. Lake Street, Chicago, Ill.
1892. Day, George F., Martinsburg, W. Va.
1891. Day, Leonidas A. L., 103 State Street, Chicago, Ill.
1887. Deady, Charles, 110 W. 48th Street, New York, N. Y.

1893. Dean, George A. 1103 Main Street, Kansas City, Mo.
1897. Dean, Louis W., Waterville, N. Y.
1891. Dearborn, Henry M., 146 W. 57th Street, New York, N. Y.
1897. Decker, William More, 416 Norwood Avenue, Buffalo, N. Y.
1893. De Baun, Edwin, 142 Main Avenue, Passaic, N. J.
1869. De Derkey, F. F., 311 W. 3d Street, Los Angeles, Cal.
1888. Defendorf, John J., Ionia, Mich.
1897. Delabarre, Walter E., 222 W. 59th Street, New York, N. Y.
1894. Delamater, Nicholas B., 31 Washington Street, Chicago, Ill.
1892. Delap, Silas C., 1214 Main Street, Kansas City, Mo.
1897. Delavan, Elizabeth Hinchley, Round Lake, N. Y.
1881. Demarest, John H., 59 W. 126th Street, New York, N. Y.
1895. Dennett, George William, South Framingham, Mass.
1898. Dennie, George E., 2315 Portland Avenue, Minneapolis, Minn.
1869. Dennis, Laban, 30 Central Avenue, Newark, N. J.
1890. Dennison, Ira Warren, 1326 L Street, N. W., Washington. D.C.
1891. DePuy, Richard G., Jamestown, N. Dak.
1875. Deschere, Martin, 334 W. 58th Street, New York, N. Y.
1858. Detwiller, John J., Easton, Pa.
1889. Dewey, Willis A., Ann Arbor, Mich.
1893. Dillingham, Thomas Manly, 8 W. 49th Street, New York, N. Y.
1883. Dillow, Geo. M., "The Rutland," 57th St. and B'way, New York, N.Y.
1887. Dills, Malcolm, Carlisle, Ky.
1878. Dinsmore, Samuel W. S., Sharpsburg, Pa.
1898. Dittmer, Ernest G., Manchester, Iowa.
1896. Dixey, Mabel G., 401 Chrogan Street, Fremont, O.
1887. Docking, Thomas, 164 Boston Avenue, San Diego, Cal.
1892. Dodd, Harry Lee, Chestertown, Md.
1895. Dodge, Charles E., 913 Elm Street, Manchester, N. H.
1894. Dodge, Horace Tennent, 28th and Downing Avenues, Denver, Col.
1891. Dolan, A. Stanley, Patton, Cal.
1898. Dorris, Alva H., 141 So. 12th Street, Lincoln, Neb.
1872. Doughty, Francis E., 512 Madison Avenue, New York, N. Y.
1895. Dowe, Frank LeC., S. Boulevard and Briggs Avenue, New York, N. Y.
1887. Dowling, John W., 8 W. 45th Street, New York, N. Y.
1897. Dowling, Joseph Ivimey, 201 East Twenty-third St., New York, N. Y.
1882. Downey, F. Edgar, Clinton, Ill.
1893. Downs, James N., 724 Columbus Street, Ottawa, Ill.
1895. Drake, Franklin Joseph, Webster City, Ia.
1895. Drake, Joseph H., 826 W. 4th Street, Des Moines, Ia.
1871. Drake, Olin M., 70 Huntington Avenue, Boston, Mass.
1897. DuBois, Willard C., 357 S. Warren Street, Syracuse, N. Y.
1869. Dudley, Pemberton, 1405 N. 16th Street, Philadelphia, Pa.
1892. Dudley, Perry Hall, 1405 N. 16th Street, Philadelphia, Pa.
1892. Duffield, Alfred Manley, 307 Clinton Street, Huntsville, Ala.
1866. Duncan, Thomas C., 100 State Street, Chicago, Ill.
1894. Dunlap, Frank, Osawatomie, Kan.
1895. Dunlevy, Rita, 328 W. 57th Street, New York, N. Y.

1891. Dunn, Charles N., Broadway and Poplar Street, Centralia, Ill.
1895. Dunn, Helen S., Broadway and Poplar Street, Centralia, Ill.
1891. Dwinell, Byron L., Taunton, Mass.

1897. Earl, George H., 18 Huntington Avenue, Boston, Mass.
1891. Eaton, Charles Woodhull, 420 Walnut Street, Des Moines, Ia.
1893. Eaton, Cora E. Smith, 608 Nicollet Avenue, Minneapolis, Minn.
1895. Eaton, Samuel Lewis, Newton Highlands, Mass.
1876. Eckel, John N., 2711 Sacramento Street, San Francisco, Cal.
1897. Eddy, Ermina Catharine, 500 William Street, Elmira, N. Y.
1893. Edgerton, Mark, 1106 Main Street, Kansas City, Mo.
1871. Edmundson, Walter F., 1321 Fifth Avenue, Pittsburg, Pa.
1895. Edwards, Franklin W., 26 Hamilton Street, Southbridge, Mass.
1894. Elliott, Charles S., 1103 Main Street, Kansas City, Mo.
1896. Elliott, Frank, 1008 Main Street, Kansas City, Mo.
1869. Elliott, Joseph B., 493 Clinton Avenue, Brooklyn, N. Y.
1897. Ellis, J. Tressler, Waynesville, O.
1892. Ely, Charles F., 34 Washington Street, Chicago, Ill.
1895. Emerson, Frederick Lincoln, 118 Hancock Street, Dorchester, Mass.
1891. Emerson, Nathaniel Waldo, 601 Boylston Street, Boston, Mass.
1895. Emery, John Taylor Gilman, 27 Main Street, Waterborough, Me.
1895. Emery, Winfred Newell, 749 Main Street, Waltham, Mass.
1897. Erb, Peter, 535 Ashland Avenue, Buffalo, N. Y.
1867. Ermentraut, John P., 261 E. 4th Street, New York, N. Y.
1894. Erni, G. Oscar, 214 E. Spring Street, New Albany, Ind.
1893. Estabrooke, William Wilmot, Jerseyville, Ill.
1892. Estep, Charles S., Lexington, Ill.
1874. Evans, Albert J., Fredonia, N. Y.
1892. Evans, Henry J., Fayette and Carey Streets, Baltimore, Md.
1875. Everett, Ambrose S., 6158 Greenwood Avenue, Chicago, Ill.
1892. Everett, Frederick, 402 Centre Street, Chicago, Ill.
1891. Everhart, Oliver T., Hanover, Pa.

1893. Fackler, Joshua M., Plymouth, O.
1871. Fager, Charles B., 120 Walnut Street, Harrisburg, Pa.
1883. Fahnestock, Joseph C., Piqua, O.
1887. Faust, Lewis, Schenectady, N. Y.
1892. Fawcett, John M., 1116 Market Street, Wheeling, W. Va.
1894. Fay, Russell P., 165 Warburton Avenue, Yonkers, N. Y.
1890. Fellows, C. Gurnee, 70 State Street, Chicago, Ill.
1867. Fellows, H. Barton, 2969 Indiana Avenue, Chicago, Ill.
1892. Fellows, William Edwin, 134 Hammond Street, Bangor, Me.
1897. Ferguson, Arthur B., 45 Federal Street, Salem, Mass.
1896. Ferwald, Herbert E., Cohasset, Mass.
1868. Finch, Edwin W., Center Ave. and Prospect St., New Rochelle, N. Y.
1855. Fincke, Bernhardt, 122 Livingston Street, Brooklyn, N. Y.
1888. Finney, Everett B., 1329 N Street, Lincoln, Neb.
1893. Fischback, Frederick W., Newport, Ky.
1873. Fisher, A. Leroy, 315 Pigeon Street, Elkhart, Ind

1893. Fisher, Anna M., Le Seuer, Minn.
1873. Fisher, Charles E., 31 Washington Street, Chicago, Ill.
1897. Fisher, Edward A., 1038 Fillmore Avenue, Buffalo, N. Y.
1895. Fiske, Edwin Rodney, 484 Bedford Avenue, Brooklyn, N. Y.
1867. Fiske, William M. L., 484 Bedford Avenue, Brooklyn, N. Y.
1869. Flanders, David P., Belfast, Me.
1879. Flanders, Martha J., Lynn, Mass.
1891. Fleming, John R., 1903 Pacific Avenue, Atlantic City, N. J.
1898. Fletcher, Cyrus G., North Yakima, Wash.
1892. Flinn, Irvine M., 409 W. 8th Street, Wilmington, Del.
1891. Flinn, Lewis W., 510 W. 9th Street, Wilmington, Del.
1881. Flint, Almena J. Baker, 102 Huntington Avenue, Boston, Mass.
1898. Flower, Frank Warren, Carthage, Mo.
1896. Foote, Dellizon A., 200 Paxton Block, Omaha, Neb.
1895. Forbes, Charles Holt, 429 School Street, Athol, Mass.
1874. Forbes, George F., 42 Williams Street, Worcester, Mass.
1898. Forbes, Wm. O., 77 East 39th Street, Chicago, Ill.
1895. Forsbeck, Filip A., 425 Milwaukee Street, Milwaukee, Wis.
1897. Forster, William A., 328 Rialto Bldg., Kansas City, Mo.
1881. Foss, David, Newburyport, Mass.
1897. Foss, John B., Crete, Neb.
1880. Foster, Richard N., 553 Jackson Boulevard, Chicago, Ill.
1867. Foster, William D., 420 W. 11th Street, Kansas City, Mo.
1888. Fowler, De Witt C., Aberdeen, S. Dakota.
1896. Fowler, Walter N., Bluffton, Ind.
1889. Franklin, William A., Harvey, Ill.
1897. Frazee, Charles Edward, 1662 Broadway, Buffalo, N. Y.
1897. Frazer, Francis Macdonald, 41 W. 45th Street, New York, N. Y.
1897. Freeborn, Grant, Waterbury, Conn.
1886. Freer, James A., 1523 I Street, N. W., Washington, D. C.
1875. French, Hayes C., Y. M. C. A. Bldg., San Francisco, Cal.
1894. French, Malachi R., 44 E. Madison Street, Chicago, Ill.
1896. Frost, William A., Tecumseh, Mich.
1895. Fryer, Winsor F., 26 Oak Street, Middleboro, Mass.
1893. Fulford, George Howard, 233 Phillips Avenue S., Sioux Falls, S. Dak.
1885. Fuller, Charles Gordon, 38 Central Music Hall, Chicago, Ill.
1895. Fuller, Walter Tracy, 738 Dudley Street, Boston, Mass.
1872. Fulton, Henry W., cor. Ripley and Highland Av., Pittsburg, Pa.
1894. Furman, Horace S., 1705 Tioga Street, Philadelphia, Pa.

1886. Gale, Charles A., Rutland, Vt.
1891. Galloway, William L., 1232 Taylor Avenue, St. Louis, Mo.
1890. Gann, John A., 53 N. Market Street, Wooster, O.
1884. Gardner, Franklin A., 1018 Fourteenth St., N. W., Washington, D. C.
1895. Gardner, Frank Augustine, 23 North Street, Salem, Mass.
1894. Gardner, Henry Seth, Lawrence, Kan.
1897. Gardner, Louis Bradstreet, 405 Prospect Avenue, Buffalo, N. Y.
1895. Gary, Clara Emerrette, 546 Columbus Avenue, Boston, Mass.
1892. Garrison, John B., 111 E. 70th Street, New York, N. Y.

1866. GARSIDE, WILLIAM B., East Orange, N. J.
1896. Garwood, Vashti D., 40 Twelfth Street, Ann Arbor, Mich.
1889. Gatchell, Charles, 162 Thirtieth Street, Chicago, Ill.
1895. Geddes, Annie Lowe, 69 Fullerton Avenue, Montclair, N. J.
1881. Geiser, S. R., 1511 Baymiller Street, Cincinnati, O.
1891. Geohegan, Wm. A., 918 Hawthorne Ave., Price's Hill, Cincinnati, O.
1896. George, Edgar J., 31 Washington Street, Chicago, Ill.
1897. George, William E., Market and Delaware Sts., Indianapolis, Ind.
1893. Gibbs, James C., Crown Point, Ind.
1897. Gibson, David M., 412 S. Jefferson Avenue, St. Louis, Mo.
1897. Gifford, Edward F., 402 W. 8th Street, Erie, Pa.
1869. GIFFORD, GILBERT L., Hamilton, N. Y.
1879. Gifford, Willis B., Attica, N. Y.
1888. Gilbert, Charles B., 1403 H Street, N. W., Washington, D. C.
1891. Gilbert, Irwin B., 2027 Columbia Avenue, Philadelphia, Pa.
1894. Gilchrist, James Grant, 215 College Street, Iowa City, Ia.
1890. Gillard, Edwin, 423 Columbus Avenue, Sandusky, O.
1898. Gilstrap, H. Preston, Washington, Kan.
1891. Givens, Amos Jay, Stamford, Conn.
1895. Gleason, Charles Sherman, Wareham, Mass.
1891. Godshall, Samuel G., Edge Hill, Pa.
1891. Goff, Ella D., 41 N. Diamond Street, Allegheny, Pa.
1898. Goff, Sarah A., cor. Harrison and 9th Streets, Cañon City, Colo.
1897. Goddard, John, Jr., 3514 Main Avenue, Avondale, Cincinnati, Ohio.
1897. Goldsmith, Alfred E., Home City, O.
1887. Gooding, E. Jeannette, 223 W. Springfield Street, Boston, Mass.
1890. Gooding, Gertrude, Bristol, R. I.
1894. Goodman, Charles H., 3329 Washington Avenue, St. Louis, Mo.
1892. Goodman, Julia, 401 Ross Street, Hamilton, O.
1887. Goodno, William C., 1733 Chestnut Street, Philadelphia, Pa.
1898. Gordon, Arthur Horace, 268 La Salle Avenue, Chicago, Ill.
1870. GORDON, GEORGE A., Chillicothe, Mo.
1883. Gorham, George Elmer, 160 Hamilton Street, Albany, N. Y.
1889. Gorton, Fred. T., Portage, Wis.
1885. Gottschalck, William von, Central Falls, R. I.
1892. Gould, Herbert Dearborn, New Boston, N. H.
1890. Gould, William W., Rochelle, Ill.
1892. Graham, Walter S., Miami, Fla.
1869. GRAMM, GUSTAVUS E., Ardmore, Pa.
1896. Gramm, Theodore J., 846 N. Broad Street, Philadelphia, Pa.
1891. Grant, William H., Ossipee Centre, N. H.
1892. Graves, Kate I., 5663 Washington Avenue, Chicago, Ill.
1869. GRAVES, S. P., Saco, Me.
1881. Green, Charles L., 16 Jackson Street, Providence, R. I.
1898. Green, Julia Minerva, 1738 N Street, N. W., Washington, D. C.
1882. Green, William E., Little Rock, Ark.
1871. GREENLEAF, JOHN T., Owego, N. Y.
1874. Gregory, Edward P., Lafayette near State Street, Bridgeport, Conn.
1896. Gregg, Edward R., 334 S. Highland Avenue, Pittsburg, Pa.

1898. Greiner, Frank Wm., Two Rivers, Wis.
1881. Griffith, Anna E., 501 N. 4th Street, Camden, N. J.
1895. Griffith, Alexander Randall, 535 Wellington Street, Montreal, Can.
1897. Griffith, John B., Lewistown, Pa.
1891. Griffith, Lewis B., 2526 Ridge Avenue, Philadelphia, Pa.
1891. Griffith, Silas, 1431 Girard Avenue, Philadelphia, Pa.
1891. Griffith, William M., 1827 N. 17th Street, Philadelphia, Pa.
1895. Griggs, Elma, 9 E. Seneca Street, Ithaca, N. Y.
1870. Grosvenor, Lemuel C., 185 Lincoln Avenue, Chicago, Ill.
1889. Grosvenor, Lorenzo N., 756 Kenmore Avenue, Chicago, Ill.
1895. Grosvenor, Wallace Fahnestock, 1125 Sheffield Avenue, Chicago, Ill.
1883. Gross, James Eldridge, 95 Wabash Avenue, Chicago, Ill.
1897. Grove, Charles E., Hyde Block, Spokane, Wash.
1893. Grundmann, J. William, 1000 W. Jefferson Avenue, St. Louis, Mo.
1848. Guernsey, Egbert, 180 W. 59th Street, New York, N. Y.
1875. Guernsey, Joseph C., 1923 Chestnut Street, Philadelphia, Pa.
1874. Guernsey, William N., 27 W. 52d Street, New York, N. Y.
1867. Gumpert, B. B., 840 Franklin Street, Philadelphia, Pa.
1893. Gundelach, Charles H., 3900 Westminster Place, St. Louis, Mo.
1898. Gundelach, Wm. Justus, 3821 Finney Avenue, St. Louis, Mo.
1898. Gurley, Eber Whitney, 39 Windermere Street, E., Cleveland, Ohio.
1898. Gwynne, Evan Edmiston, 566 Garfield Avenue, Chicago, Ill.
1890. Gutherz, Lizzie G., 3689 Olive Street, St. Louis, Mo.
1847. Guy, Samuel S., 2517 Parrish Street, Philadelphia, Pa.

1897. Hadley, May, 94 Lincoln Avenue, Chicago, Ill.
1897. Haines, Charles Ter Bush, 91 Main Street, Whitesboro, N. Y.
1895. Haines, Oliver Sloane, 137 N. 15th Street, Philadelphia, Pa.
1887. Halbert, Homer V., 4630 Greenwood Avenue, Chicago, Ill.
1865. Hale, Edwin M., 65 Twenty-second Street, Chicago, Ill.
1898. Hall, Amos C., 1273 E. 75th Street, Chicago, Ill.
1891. Hall, Harrison B., Riverton, N. J.
1889. Hall, Levi, 77 Highland Avenue, Minneapolis, Minn.
1894. Hall, Matthew J., Mamaroneck, N. Y.
1892. Hall, P. Sharpless, 1604 Arch Street, Philadelphia, Pa.
1874. Hall, Robert, 117 Broad Street, Providence, R. I.
1885. Hall, William G., 822 Jule Street, St. Joseph, Mo.
1896. Hallman, Victor H., 606½ Central Avenue, Hot Springs, Ark.
1889. Hallock, J. Henry, Keene Valley, N. Y.
1898. Halphide, Alvan Cavala, 3458 Wabash Avenue, Chicago, Ill.
1886. Halsey, Frederick W., 272 Newberry Street, Boston, Mass.
1893. Halsted, Milton A., Jacksonville, Ill.
1897. Hamlin, Frederick William, 103 W. 48th Street, New York, N. Y.
1897. Hamlin, George Baldwin, Granada, Minn.
1852. Hammond, Milton, 310 N. Paca Street, Baltimore, Md.
1889. Hanchett, Alfred P., Council Bluffs, Ia.
1893. Hanchett, James C., Salt Lake City, Utah.
1891. Hanchett, John L., 601 Jackson Street, Sioux City, Ia.
1889. Hanchett, Wm. Henry, 323 S. 13th Street, Omaha, Neb.
1898. Hancock, Avery C., Hartington, Neb.
1897. Hancock, Elmer E., 1443 N. 17th Street, Philadelphia, Pa.

1893. Hancock, Joseph, 1639 Columbia Avenue, Philadelphia, Pa.
1894. Hann, Lucy M., 100 West Eighteenth Street, New York, N. Y.
1897. Hardy, William James, Belmont, N. Y.
1892. Harman, George W., 900 Broad Street, Newark, N. J.
1889. Harnden, George B., Sherburne, Minn.
1897. Harrell, Samuel, 96 N. 10th Street, Noblesville, Ind.
1889. Harris, Nellie R., Des Moines, Ia.
1882. Harris, W. John, 3514 Lucas Avenue, St. Louis, Mo.
1897. Harrison, Herbert Alexander, Cooperstown, N. Y.
1894. Harrison, Julia C., "The Cairo," Washington, D. C.
1895. Hartman, W. Louis, "The Kenyon," 601 Warren St., Syracuse, N. Y.
1895. Hasbrouck, Cornelius J., Hope Street, Bristol, R. I.
1875. Hasbrouck, Everett, 369 Ninth Street, Brooklyn, N. Y.
1887. Hasbrouck, Sayer, 117 Broad Street, Providence, R. I.
1889. Hassell, Samuel E., Lancaster, Wis.
1892. Hassler, J. Wyllis, 1503 Poplar Street, Philadelphia, Pa.
1892. Hassler, M. Margaret, 105 N. 8th Street, Allentown, Pa.
1881. Hassler, William A., 105 N. 8th Street, Allentown, Pa.
1893. Hastings, William C., 11 S. Washington Street, Van Wert, O.
1857. Hatch, Philo L., 1901 San Pascual Street, Santa Barbara, Cal.
1892. Hathaway, Henry Skinner, 146 W. 92d Street, New York, N. Y.
1892. Hattan, Albert Henry, Peru, Ill.
1896. Hawxhurst, Howard H., 1333 L Street, N. W., Washington, D. C.
1879. Hawkes, William J., 100 State Street, Chicago, Ill.
1895. Hawley, Hercules Reed, Staatsburg, N. Y.
1898. Hayden, Arthur Sumner, Wall Lake, Iowa.
1865. Haynes, J. R., 262 N. Illinois Street, Indianapolis, Ind.
1869. Hayward, Joseph W., Taunton, Mass.
1895. Haywood, George William, 45 Hanover Street, Lynn, Mass.
1884. Hazard, Theodore Lincoln, 12 N. Clinton Street, Iowa City, Ia.
1897. Heath, Gertrude Emma, 164 Water Street, Gardiner, Me.
1888. Heberton, William W., South Orange, N. J.
1890. Hedges, Albert P., 754 E. Fullerton Avenue, Chicago, Ill.
1868. Hedges, S. P., 890 Evanston Avenue, Chicago, Ill.
1897. Helfrich, Charles H., 64 W. 49th Street, New York, N. Y.
1887. Heilner, Herbert Franklin, Burr Building, Scranton, Pa.
1853. Helmuth, William Tod, 504 Fifth Avenue, New York, N. Y.
1887. Helmuth, William Tod, Jr., 465 Lexington Avenue, New York, N. Y.
1896. Hendershott, Lizzie A., Irving, Mich.
1895. Hendy, Clara A., Oak Park, Cook Co., Ill.
1894. Henry, Samuel Dwyer, Excelsior Springs, Mo.
1892. Heritage, Alfred C., Jenkintown, Pa.
1898. Hermann, John, 701 Jackson Street, Sioux City, Iowa.
1874. Herron, Charles D., 3505 Butler Street, Pittsburg, Pa.
1887. Hershberger, Joseph P., 351 East Main Street, Lancaster, O.
1891. Hetherington, Judson Egbert, 1035 Warren Avenue, Chicago, Ill.
1885. Hicks, Susan M., "The Grand," Atlanta, Ga.
1871. Higbee, Albert E., Masonic Temple, Minneapolis, Minn.
1871. Higsbee, Chester G., 2912 Stevens Avenue, Minneapolis, Minn.
1891. Hill, Lucy Chaloner, 492 N. Main Street, Fall River, Mass.
1898. Hill, Marion Jasper, 507 Locust Avenue, Sperling, Ill.

1895. Hill, Noble Hind, 35 Huntington Avenue, Boston, Mass.
1867. HILL, ROBERT L., 564 Fourteenth Street, Oakland, Cal.
1892. Hill, W. Scott, 154 State Street, Augusta, Me.
1897. Hilton, Willard M., 435 Penn Avenue, Waverly, N. Y.
1876. Hindman, David R., Marion, Ia.
1867. HINDS, W. H. W., Milford, N. H.
1896. Hinsdale, Wilbert B., Ann Arbor, Mich.
1891. Hislop, Margaret, 313 M Street, N. W., Washington, D. C.
1873. HITCHCOCK, DEXTER, Norwalk, Conn.
1879. Hoag, Clitus S., 321 Lafayette Street, Bridgeport, Conn.
1896. Hoag, Frank L., 373 S. College Avenue, Grand Rapids, Mich.
1896. Hoag, James H., Oxford, Ind.
1887. Hobart, W. F., Oakes, N. Dak.
1895. Hodgdon, Frank A., 45 Pleasant Street, Malden, Mass.
1897. Hodge, Jacob Sylvester, Raymond Ave. & Green St., Pasadena, Cal.
1895. Hodge, William H., 265 Third Street, Niagara Falls, N. Y.
1897. Hœfle, Henry C., 314 Brady Street, Davenport, Ia.
1892. Hoey, William F., Frederica, Del.
1880. Hofmann, Charles H., 510 S. Highland Avenue, Pittsburg, Pa.
1886. Hoffman, Jacob Oliver, Orleans, Neb.
1897. Holden, Horace Thomas, 2536 Dodge Street, Omaha, Neb.
1893. Holland, Joseph H., Argentine, Kan.
1897. Hollister, Frederick Kellogg, 521 Madison Avenue, New York, N. Y.
1896. Holmes, Frances W., Bellevue Avenue, Upper Montclair, N. J.
1887. Holmes, Henry P., Lansingburg, N. Y.
1869. HOLT, EDWARD B., Lowell, Mass.
1897. Holton, Charles Smoot, 316 Main St., Richmond, Ky.
1893. Honberger, Frank Henry, 3808 Indiana Avenue, Chicago, Ill.
1894. Hood, C. Todd, 31 Washington Street, Chicago, Ill.
1885. Hooker, Edward Beecher, 253 Main Street, Hartford, Conn.
1889. Hoover, Willis C., Iquique, Chili, S. A.
1896. Hopkins, William T., 65 Broad Street, Lynn, Mass.
1897. Hopkins, William Wilder, 114 Main Street, Geneva, N. Y.
1883. Horner, J. Richey, 504 Permanent Block, Euclid Avenue, Cleveland, O.
1888. Horning, David W., 604 Dayton Building, Minneapolis, Minn.
1888. Hough, Walter D., Niagara Falls, N. Y.
1859. HOUGHTON, HENRY A., 136 Marlborough Street, Boston, Mass.
1867. HOUGHTON, HENRY C., 7 W. 39th Street, New York, N. Y.
1888. Houghton, Neidhard H., 845 Boylston Street, Boston, Mass.
1875. House, Robert B., Springfield, O.
1883. Howard, Erving Melville, 401 Linden Street, Camden, N. J.
1881. Howe, J. Morgan, 58 W. 47th Street, New York, N. Y.
1889. Howe, Willella, Santa Anna, Cal.
1898. Howe, Warren D., 831 Main Street, Cañon City, Col.
1883. Hoyt, Charles, Chillicothe, O.
1894. Hoyt, Lucius F., Jefferson, Ia.
1896. Hoyt, Mary O., 26 N. 4th Street, Keokuk, Ia.
1891. Hubbard, Charles H., 8th and Madison Streets, Chester, Pa.
1894. Hudson, Thomas Howard, Kansas City, Mo.
1888. Humphrey, Frank M., South Windham, Conn.
1898. Humphrey, Howard M., Lake City, Iowa.

1869. HUMPHREY, OTIS M., 100 E. 14th Street, Minneapolis, Minn.
1894. Humphrey, William Armine, Plattsmouth, Neb.
1895. Hunt, Annie W., 217 Washington Street, Providence, R. I.
1892. Hunt, Charles Richard, 262 Union Street, New Bedford, Mass.
1874. Hunt, Dwight B., 159 Madison Avenue, New York, N. Y.
1898. Hunt, George Henry, Paris, Ill.
1896. Hunt, John S., Athens, O.
1886. Hunt, Maurice P., "The Ruggery," Columbus, O.
1884. Hunter, Horatio M., Lowell, Mass.
1888. Hurd, S. Wright, 73 Main Street, Lockport, N. Y.
1898. Hurd, Laura B., 745 Guererro Street, San Francisco, Cal.
1896. Huss, John R., Eureka, Kan.
1897. Hussey, Elisha P., 493 Porter Avenue, Buffalo, N. Y.
1872. HUTCHINS, HORACE S., Batavia, N. Y.
1895. Hyde, Louis D., Owego, N. Y.
1896. Hyde, Rufus J., Eaton Rapids, Mich.

1897. Irons, Francesca L., Church Street, Brookfield Village, N. Y.
1894. Irvine, Joseph Clinton, Steele Block, Denver, Col.
1893. Irwin, Thomas A., 1234 Liberty Street, Franklin, Pa.
1897. Irving, Walter W., 173 Wisconsin Street, Milwaukee, Wis.
1887. Ivins, Horace F., 1621 Chestnut Street, Philadelphia, Pa.

1876. Jackson, Edward R., Dubuque, Ia.
1878. Jackson, William L., 86 Dudley Street, Roxbury, Boston, Mass.
1859. JAMES, BUSHROD W., cor. Green and 18th Streets, Philadelphia, Pa.
1897. James, D. Bushrod, 2005 N. 12th Street, Philadelphia, Pa.
1866. JAMES, JOHN E., 1521 Arch Street, Philadelphia, Pa.
1891. Janney, O. Edward, 837 N. Eutaw Street, Baltimore, Md.
1886. Jefferds, Henry Clarke, 67 Dakum Building, Portland, Ore.
1859. JEFFERDS, GEORGE P., Bangor, Me.
1896. Jenkins, Charlie G., Mason, Mich.
1891. Jenkins, Ralph, 1732 Massachusetts Avenue, N. W., Washington, D. C.
1894. Jenks, Frank R., 332 Main Street, Pawtucket, R. I.
1873. JENNEY, WILLIAM H., Broadway and 12th Street, Kansas City, Mo.
1887. Jewett, Joseph Waldo, New Haven, Conn.
1887. Jewitt, Edward H., 484 Arcade, Cleveland, O.
1893. Johns, Emory B., 24 E. 2d Street, Lexington, Ky.
1893. Johnson, Charles Frederic, 26 Market Street, Newburyport, Mass.
1893. Johnson, Cora May, Skowhegan, Me.
1897. Johnson, Frederick Charles, 191 Congress Street, Bradford, Pa.
1876. Johnson, George H. T., Atchison, Kan.
1860. JOHNSON, ISAAC D., Kennett Square, Pa.
1876. Johnson, Maria N., 963 Orange St., Los Angeles, Cal.
1870. JOHNSON, R. B., Ravenna, O.
1895. Johnson, Sara, "The Cluny," Copley Square, Boston, Mass.
1890. Johnson, Solomon D., 403 Grand Avenue, Milwaukee, Wis.
1892. Johnson, Thaddeus L., Pomona, Cal.
1886. Johnson, Theodore M., 200 Susquehanna Avenue, Pittston, Pa.
1896. Johnston, Charles L., 467 Vanderbilt Avenue, Brooklyn, N. Y.
1891. Jones, A. Cuvier, Tucson, Ariz.
1874. Jones, Charles E., Albany, N. Y.

1873. JONES, GAIUS J., 5 Rockwell Street, Cleveland, O.
1867. JONES, HENRY C., 1220 S. First Avenue, Mount Vernon, N. Y.
1892. Jones, John J., 1802 Mount Vernon Street, Philadelphia, Pa.
1886. Jones, Joseph, San Antonio, Tex.
1858. JONES, JOSEPH E., West Chester, Pa.
1875. Jones, Leonidas M., Brooklyn, Mich.
1898. Jones, Mary Hoffman, Hyde Park, Chicago, Ill.
1889. Just, August Adolph, Crookston, Minn.

1890. Kaetel, Charles H., Maysville, Wis.
1896. Kahlke, Charles E., 3034 Michigan Avenue, Chicago, Ill.
1876. Kanouse, Abijah W., Appleton, Wis.
1890. Kanouse, Edward M., Wausau, Wis.
1893. Karsner, Charles W., 316 South Twelfth Street, Philadelphia, Pa.
1893. Karst, F. August, 636 Sedgwick Street, Chicago, Ill.
1892. Kasselman, Harry Christian, Midway, Ky.
1888. Keegan, William A., 40 South Clinton Street, Rochester, N. Y.
1891. Keeler, Charles B., New Canaan, Conn.
1889. Keeler, E. Elmer, 423 E. Jefferson Street, Syracuse, N. Y.
1874. Keep, Caroline J. Yeomans, 308 W. 36th Street, New York, N. Y.
1867. KEEP, J. LESTER, 460 Clinton Avenue, Brooklyn, N. Y.
1898. Kehoe, Henry C., Flemingsburg, Ky.
1892. Kehr, Samuel S., California Building, Denver, Col.
1897. Keith, Ellen L., Winter Street, Framingham, Mass.
1895. Keith, Horace G., 107 South Broadway, Yonkers, N. Y.
1893. Keith, William E., San José, Cal.
1858. KELLOGG, EDWIN M., 115 E. 37th Street, New York, N. Y.
1894. Kenyon, Frances Aureola, Kenosha, Wis.
1896. Kerch, Harry E., Dundee, Ill.
1894. Kerr, Harlan T., 105 Perry Street, Peoria, Ill.
1878. Kershaw, J. Martine, 3421 Washington Avenue, St. Louis, Mo.
1897. Kilgour, Peter Thompson, College Hill, O.
1870. KING, EDWARD H., 729 Sixteenth Street, Denver, Col.
1897. King, Walter Joel, 2348 Champa Street, Denver, Col.
1888. King, William R., 1422 K Street, N. W., Washington, D. C.
1891. King, William Harvey, 64 W. 51st Street, New York, N. Y.
1894. King, Sylvester M., Albia, Ia.
1895. Kingsbury, Edward N., 93 Blackstone Street, Woonsocket, R. I.
1891. Kingsman, Richard, 701 E. Capitol Street, Washington, D. C.
1887. Kinne, Arthur B., Syracuse, N. Y.
1892. Kinne, Porter S., Paterson, N. J.
1869. KINNE, THEODORE Y., Paterson, N. J.
1891. Kinley, Joseph B., 1406 Champa Street, Denver, Col.
1880. Kinyon, Claudius B., Ann Arbor, Mich.
1870. KIPPAX, JOHN R., 3154 Indiana Avenue, Chicago, Ill.
1892. Kirk, Ellen Maria, 169 W. 7th Street, Cincinnati, O.
1893. Kirkland, Edward, Bellow's Falls, Vt.
1890. Kirkpatrick, John C., 328 W. 3d Street, Los Angeles, Cal.
1891. Kistler, Abraham L., 115 N. 9th Street, Allentown, Pa.
1869. KITTINGER, LEONARD, 724 King Street, Wilmington, Del.
1886. Kittinger, Leonard Armor, 724 King Street, Wilmington, Del.

1896. Klein, Emma, 156 St. Aubin Avenue, Detroit, Mich.
1895. Klopp, Henry Irwin, Westboro, Mass.
1871. KNERR, CALVIN B., 1137 Spruce Street, Philadelphia, Pa.
1887. Knight, Stephen H., 18 W. Willis Avenue, Detroit, Mich.
1897. Knowlton, James Mathews, S. 9th Street, Indiana, Pa.
1888. Knox, Joseph H., 11 College Avenue, Waterville, Me.
1896. Koch, Margaret, 628 Fourth St., S. E., Minneapolis, Minn.
1875. Korndœrfer, Augustus, 1728 Green Street, Philadelphia, Pa.
1897. Korndœrfer, Augustus, Jr., 1728 Green Street, Philadelphia, Pa.
1886. Kraft, Frank, 57 Bell Avenue, Cleveland, O.
1897. Krauss, James, 377 Boylston Street, Boston, Mass.
1865. KREBS, FRANCIS H., 42 Union Park, Boston, Mass.
1896. Kreider, Martin K., Goshen, Ind.
1892. Krewson, Amos D., 4613 Paul Street, Frankford, Philadelphia, Pa.
1888. Krogstad, Henry, 915 Sixteenth Street, N. W., Washington, D. C.

1894. Laidlaw, George Frederick, 137 W. 41st Street, New York, N. Y.
1887. Laird, F. F., Utica, N. Y.
1874. Laird, William T., Watertown, N. Y.
1897. Lambden, Frank W., 95 E. Chicago Avenue, Chicago, Ill.
1896. Lance, John D., Broadway, Providence, R. I.
1896. Lards, Charles H., 33 Butler Street, Adrian, Mich.
1898. Larbeque, Garrett Bancroft Breckinridge, 345 Main St., Athol, Mass.
1895. Latham, Carrie Augusta, 38 Central Street, Leominster, Mass.
1895. Lawrence, F. Mortimer, 1601 Girard Avenue, Philadelphia, Pa.
1894. Lawrence, George W., Colorado Springs, Col.
1885. Lawshé, John Z., 116½ Peachtree Street, Atlanta, Ga.
1891. Layman, Alfred, 1630 N. 18th Street, Philadelphia, Pa.
1898. Leake, Endell N., 237 W. Sixth Street, Tremont, Neb.
1889. Leal, Malcolm, 107 W. 48th Street, New York, N. Y.
1896. Leavitt, Henry H., 909 Fourth Street, S. E., Minneapolis, Minn.
1882. Leavitt, Sheldon, 148 Thirty-seventh Street, Chicago, Ill.
1888. Lee, John Mallory, 89 Plymouth Avenue, Rochester, N. Y.
1888. Lee, Sarah Idella.
1890. Lefferts, Franklin P., Belvidere, N. J.
1895. Lehman, Franklin Frees, Kingsbury Block, Sandusky, O.
1897. Leitch, Robert Newton, Lerna, Ill.
1890. Leland, A. G., Whitewater, Wis.
1891. Leland, Clarence H., 128 Merrimack Street, Lowell, Mass.
1896. Lenfestey, John A., 27 N. Gratiot Street, Mount Clemens, Mich.
1891. Lentz, Levi R., Fleetwood, Pa.
1882. Leonard, William E., 608 Nicollet Avenue, Minneapolis, Minn.
1886. Le Seuer, John Wesley, Batavia, Genesee County, N. Y.
1888. Leseuer, Oscar, 406 Cass Avenue, Detroit, Mich.
1897. Lewis, Frederick Daniel, 188 Franklin Street, Buffalo, N. Y.
1877. Lewis, F. Park, 454 Franklin Street, Buffalo, N. Y.
1871. LEWIS, HENRY M., "Florence," 18th St. and 4th Av., New York, N. Y.
1880. Lewis, Joseph, Jr., 330 Hanover Street, Milwaukee, Wis.
1893. Light, Jacob Wilbert, Kingman, Kan.
1895. Lines, Mary Louise, 344 Washington Avenue, Brooklyn, N. Y.
1887. Linn, A. M., 605 Walnut Street, Des Moines, Ia.

1893. Linn, Ellis Gregg, Mt. Pleasant, Ia.
1885. Linnell, E. H., 61 Broadway, Norwich, Conn.
1895. Lippitt, Louis Davis, 24 Dyer Avenue, Olneyville, R. I.
1893. Llewellyn, Henry S., N. E. c. 5th and Harris Avenues, La Grange, Ill.
1893. Loelkes, George, 202 S. Jackson Street, Belleville, Ill.
1890. Lowe, Thomas, Slayton, Minn.
1885. Lowenthal, Louis, 1405 W. 103d Street, Chicago, Ill.
1895. Lowry, Charles.
1898. Loy, Ed. N., cor. Franklin and Walnut Streets, Troy, Ohio.
1857. LUDLAM, REUBEN, 1823 Michigan Avenue, Chicago, Ill.
1887. Ludlam, Reuben, Jr., 2327 Michigan Avenue, Chicago, Ill.
1873. LUKENS, M. B., 161½ Edgewood Avenue, Atlanta, Ga.
1896. Lunger, Justus S., E. Water Street, Prospect, O.
1897. Luyties, Carl J., 2816 Lafayette Avenue, St. Louis, Mo.

1895. Maas, Elizabeth C., 129 N. Main Street, Rockford, Ill.
1895. MacBride, Nathaniel Louis, 158 W. 43d Street, New York, N. Y.
1892. MacCallum, John H., 408 Monroe Avenue, Rochester, N. Y.
1893. MacCracken, Mary E. Avery, 4327 Greenwood Avenue, Chicago, Ill.
1890. MacCracken, William P., 4327 Greenwood Avenue, Chicago, Ill.
1892. MacDonald, John A.
1891. MacDonald, Thomas L., 1402 Massachusetts Avenue, N. W., Washington, D. C.
1891. Macfarlan, Duncan, 3924 Chestnut Street, Philadelphia, Pa.
1868. MACFARLAN, MALCOLM, 1805 Chestnut Street, Philadelphia, Pa.
1895. Mack, Helen G. Flagler, 92 White Street, Boston, Mass.
1886. MacLachlan, Daniel A., 1301 Majestic Building, Detroit, Mich.
1898. Macomber, Addison P., Atlantic, Ohio.
1887. Macomber, H. K., Pasadena, Cal.
1891. Macrum, Charles A., Marquam Block, Portland, Ore.
1896. McCauley, John C., 128 Connecticut Street, Rochester, Pa.
1896. McCausland, H. G., 25 High Street, W. Detroit, Mich.
1881. McClellan, David, 104 Clinton Avenue, West Hoboken, N. J.
1879. McClelland, John B., 409 Penn Avenue, Pittsburg, Pa.
1867. MCCLELLAND, JAMES H., cor. 5th and Wilkins Avenue, Pittsburg, Pa.
1884. McClelland, Robert Watson, c. 5th and Wilkins Ave., Pittsburg, Pa.
1881. McClure, Eliza Lang, 1919 Wallace Street, Philadelphia, Pa.
1894. McClure, John R., 98 E. 2d Street, Portsmouth, O.
1898. McConnell, Carl Philip, West Salem, Wis.
1896. McCormick, A. L., 3110 Woodburn Avenue, Cincinnati, O.
1895. McCullock, Carleton B., Cook County Hospital, Chicago, Ill.
1873. MCDERMOTT, GEORGE C., Odd Fellows' Temple, Cincinnati, O.
1874. McDonald, William O., 117 W. 44th Street, New York, N. Y.
1886. McDowell, Charles, 116 W. 13th Street, New York, N. Y.
1891. McDowell, George W., 136 W. 130th Street, New York, N. Y.
1894. McElwee, L. Claude, 215 S. Jefferson Avenue, St. Louis, Mo.
1869. MCGEORGE, WALLACE, 521 Broadway, Camden, N. J.
1893. McGill, James Palmer, 4553 Forestville Avenue, Chicago, Ill.
1874. McGarock, Clara Plimpton, P. O. Box 346, Nashville, Tenn.
1894. McIntosh, James W.
1896. McIntyer, Edwin R., 386 N. Clark Street, Chicago, Ill.

1889. McKinney, Samuel P., 829 Warren Avenue, Chicago, Ill.
1891. McKinstry, Frank P., Washington, N. J.
1896. McLaren, William R., 25 Washington Avenue, Detroit, Mich.
1891. McMichael, Arkell R., 969 Madison Avenue, New York, N. Y.
1896. McMillan, Frances, Jackson Building, Nashville, Tenn.
1891. Maddux, Daniel P., 700 Madison Street, Chester, Pa.
1895. Maeder, John G., 304 E. 120th Street, New York, N. Y.
1891. Malin, William H., Chestnut Hill, Philadelphia, Pa.
1898. Mann, Eugene Langdon, 681 Endicott St., St. Paul, Minn.
1895. Mann, Martha Elizabeth, 2 Commonwealth Avenue, Boston, Mass.
1896. Mann, Jesse E., Fonda Block, Louisville, Ky.
1894. Mansfield, Harry Knox, 19 W. Chelten Ave., Germantown, Phila., Pa.
1881. Mansfield, Job R., 4852 Main Street, Germantown, Philadelphia, Pa.
1848. Marcy, Erastus E., 396 Fifth Avenue, New York, N. Y.
1897. Marcy, William Henry, 1148 Main Street, Buffalo, N. Y.
1892. Mark, Ella V., 717 Madison Avenue, Baltimore, Md.
1895. Marsh, Franklin F., 106 Tremont Street, Boston, Mass.
1892. Marshall, Anna M., 1928 Chestnut Street, Philadelphia, Pa.
1890. Marshall, Robert S., 424 Shady Avenue, Pittsburg, Pa.
1871. Martin, Constantine H., Allentown, Pa.
1893. Martin, Eleanor Frances, 606 Sutter Street, San Francisco, Cal.
1895. Martin, George Albert, Boone, Boone County, Ia.
1893. Martin, Francis V., Westville, Ind.
1891. Martin, George Forrest, 17 Kirk Street, Lowell, Mass.
1889. Martin, George H., 606 Sutter Street, San Francisco, Cal.
1897. Martin, Leslie, 22 Genesee Street, Baldwinsville, N. Y.
1891. Martin, Lynn Arthur, 74 Exchange Street, Binghamton, N. Y.
1892. Martin, Truman J., 245 North Street, Buffalo, N. Y.
1878. Martin, W. J., 1712 Carson Street, S., S. Pittsburg, Pa.
1867. Mason, J. R., Devall's Bluff, Ark.
1897. Massinger, Omray Lester, 293 State Street, Bridgeport, Conn.
1892. Mattson, Alfred Simmons, Moorestown, N. J.
1894. Maurer, Joseph M., 59 W. Wheeling Street, Washington, Pa.
1892. Maxwell, Lewis K., 2208 Monroe Street, Toledo, O.
1895. May, Geo. Elisha, Institution Ave. & Beacon St., Newton Centre, Mass.
1887. Maycock, Burt J., 33 Allen Street, Buffalo, N. Y.
1891. Mayer, Charles R., 1032 St. Charles Avenue, New Orleans, La.
1895. Meade, Stephen Johnson D., 417 Everett Street, Cincinnati, O.
1895. Meader, Lee Douglas, 28 W. 7th Street, Cincinnati, O.
1891. Means, J. W., Troy, O.
1894. Mellies, Charles, 3825 N. 20th Street, St. Louis, Mo.
1885. Mellus, Edward Lyndon.
1894. Menninger, Charles Frederic, 727 Kansas Avenue, Topeka, Kan.
1891. Mercer, Edward W., 157 N. 15th Street, Philadelphia, Pa.
1871. Mercer, Robert P., 223 W. 3d Street, Chester, Pa.
1876. Mercer, William M., Galveston, Tex.
1898. Merryman, Thos. T., 533 W. 27th Street, Lincoln, Neb.
1898. Metcalf, Frank A., 47th and Kenwood Ave., Chicago, Ill.
1897. Mickle, J. Byron, Main Street, Cambridge Springs, Pa.
1871. Middleton, Caleb S., 1523 Girard Avenue, Philadelphia, Pa.
1869. Middleton, M. F., 423 Market Street, Camden, N. J.

1894. Miessler, C. F. Otto, Columbus, Platt Co., Neb.
1887. Milbank, William E., 111 State Street, Albany, N. Y.
1889. Miller, Byron E., "The Dekum," Portland, Ore.
1875. Miller, Christopher C., 31 Winder Street, Detroit, Mich.
1895. Miller, Edward Roscoe, 15 Merriam Street, Leominster, Mass.
1895. Miller, Lizbeth Dora, 12 Cordis Street, Boston, Mass.
1883. Miller, John, 48 St. John's Place, Buffalo, N. Y.
1888. Miller, Zachary T., 2013 Carson Street, Pittsburg, Pa.
1898. Miller, Robt. P., Greenfield, Iowa.
1895. Mills, Walter Sands, 152 West 119th Street, New York, N. Y.
1896. Mills, Wesley J., Howell, Mich.
1887. Millsop, Sarah J., Bowling Green, Ky.
1897. Miner, Herbert Smith, 909 Central Avenue, Fort Dodge, Ia.
1898. Miner, James B., Osage, Iowa.
1888. Minton, Henry Brewster, 165 Joralemon Street, Brooklyn, N. Y.
1896. Mitchell, Clifford, 70 State Street, Chicago, Ill.
1871. Mitchell, John J., Newburgh, N. Y.
1898. Mitchell, John A., 69 N. Third Street, Newark, Ohio.
1875. Mitchell, John N., 1505 Spruce Street, Philadelphia, Pa.
1866. Mitchell, J. S., 2954 Prairie Avenue, Chicago, Ill.
1881. Moffat, Edgar V., 476 Main Street, Orange, N. J.
1881. Moffat, John L., 17 Schermerhorn Street, Brooklyn, N. Y.
1892. Moffit, Melvin M., 127 B Street, S. E., Washington, D. C.
1876. Mohr, Charles, 1823 Green Street, Philadelphia, Pa.
1876. Monmonier, Julius L., 480 Classon Avenue, Brooklyn, N. Y.
1894. Montgomery, Phineas J., 217 Fourth Street, Council Bluffs, Ia.
1891. Montgomery, Richard W., 48 W. 94th Street, New York, N. Y.
1895. Monroe, John Eugene, Orange, Mass.
1896. Moon, Seymour B., 1314 Eighth Avenue, Beaver Falls, Pa.
1892. Moore, J. Herbert, Brookline, Mass.
1898. Moorhead, James, 743 Twelfth Street, Marion, Iowa.
1893. Mordoff, Charles H., Genoa, Ill.
1867. Morgan, John C., Millville, N. J.
1884. Morgan, William L., 202 W. Franklin Street, Baltimore, Md.
1890. Morgan, Willis B., 4200 N. Grande Avenue, St. Louis, Mo.
1890. Morely, F. W., Washington Row, Sandusky, O.
1873. Morrill, Edwin C., Norwalk, O.
1894. Morrison, Frank A., 6 S. Main Street, Rock Creek, O.
1898. Morse, Bertrand, Atlantic, Iowa.
1895. Morse, Charles W., 101 Essex Street, Salem, Mass.
1894. Morse, John Newton.
1898. Morse, Lucius B., Cook Co. Hospital, Chicago, Ill.
1872. Morse, Lucius D., P. O. Box 584, Atlanta, Ga.
1869. Morse, Martin V. B., Marblehead, Mass.
1867. Morse, Nathan R., Salem, Mass.
1898. Morton, Ed. Clarence, 2348 Champa Street, Denver, Col.
1897. Mosher, Charles Leonard.
1891. Mosher, Mary E., 53 Blue Hill Avenue, Roxbury, Mass.
1881. Moss, Mary Denison, 231 Broadway, Providence, R. I.
1869. Mossman, Nathan A., 28 E. 47th Street, New York, N. Y.
1890. Mowry, Henry P., Bronson, Mich.

1896. Mueller, Gustave A., 400 Penn Avenue, Pittsburg, Pa.
1894. Mulford, Clarence H., Greeley, Col.
1897. Müller, Laura, 213 Stanley Street, Montreal, Can.
1892. Munns, Charles O., Oxford, O.
1891. Munson, Milton L., 1503 Pacific Avenue, Atlantic City, N. J.
1892. Murdock, Edward A., 22 Pleasant Street, Spencer, Mass.
1893. Myers, Amos J., Creston, Ia.
1895. Myers, Charles E., 170 Green Lane, Manayunk, Philadelphia, Pa.
1895. Myers, Cornelius H., 305 Washington Street, South Bend, Ind.
1890. Myers, Priscilla G., Aurora, Ill.
1891. Myers, Samuel I., Avenue C and W. 33d Street, Bayonne, N. J.

1892. Nead, Will M., 205 State Street, Albany, N. Y.
1894. Neal, George H., Falls City, Neb.
1867. Negendank, Augustus, 1112 Washington Street, Wilmington, Del.
1891. Negendank, Egmont T., 1112 Washington Street, Wilmington, Del.
1893. Neiberger, William Emory, 402 W. Jefferson Street, Bloomington, Ill.
1895. Neilson, Howard Stout, 46 W. 48th Street, New York, N. Y.
1890. Neumeister, Anton E., 1214 Main Street, Kansas City, Mo.
1892. Newberry, Frank J., 12 N. Clinton Street, Iowa City, Ia.
1890. Newell, R. C., 70 State Street, Chicago, Ill.
1895. Newton, Frank Loomis, 147 Highland Avenue, Somerville, Mass.
1897. Newton, John Burnell, Unionsville, Conn.
1876. Nichols, Ammi S., 608 Dekum Block, Portland, Ore.
1880. Nichols, Charles L., Worcester, Mass.
1897. Nichols, G. Louis, Spring Street, Stafford Springs, Conn.
1886. Nickelson, W. H., A. D. Ripley Block, Adams, N. Y.
1893. Nivison, Anna T., 567 Orange Street, Newark, N. J.
1889. Noble, James H., Eau Claire, Wis.
1893. Norris, Maria Whittelsey, Widdicomb Building, Grand Rapids, Mich.
1894. Northrup, Emerson S., 414 Garfield Avenue, Kansas City, Mo.
1889. Norton, Arthur B., 16 W. 45th Street, New York, N. Y.
1887. Norton, Claude R., 700 N. 40th Street, Philadelphia, Pa.
1881. Nott, Frederick J., 554 Madison Avenue, New York, N. Y.
1889. Nottingham, David M., Lansing, Mich.
1888. Nottingham, John C., Bay City, Mich.
1891. Nowell, John F., Greencastle, Pa.
1895. Noyes, Henry A., Mount Carroll, Ill.
1894. Nye, James D., 1443 Champa Street, Denver, Col.

1882. Obetz, Henry L., 139 First Street, Detroit, Mich.
1896. O'Brien, Emilie Y., 2825 Fourteenth Street, N. W., Washington, D. C.
1872. Ockford, George M., 3 Oak Street, Ridgewood, N. J.
1889. O'Connor, Joseph T., 18 W. 43d Street, New York, N. Y.
1898. Ogdon, Benj. Harvey, Germain Bnk. Bldg., St. Paul, Minn.
1897. Ogden, Edwin G., 451 West End Avenue, New York, N. Y.
1884. Olin, Rollin C., 110 Henry Street, W. Detroit, Mich.
1890. Olmstead, Austin F., Green Bay, Wis.
1893. Olmsted, Elmer D., Spokane, Wash.
1895. Opdyke, Levings A., 55 Clinton Avenue, Jersey City, N. J.
1893. Orleman, E. Louise, 32 Bagg Street, Detroit, Mich.

1859. ORME, FRANCIS H., 70 N. Forsyth Street, Atlanta, Ga.
1883. Ormes, Francis D., Jamestown, N. Y.
1876. Ostrom, Homer I., 42 W. 48th Street, New York, N. Y.
1893. Owen, Charles S., 123 Main Street, Wheaton, Ill.
1898. Owen, Milton G., Lincoln, Ill.

1881. Packard, Horace, 362 Commonwealth Avenue, Boston, Mass.
1886. Packer, Henry E., 11 Pleasant Street, Woburn, Mass.
1895. Pagan, Frank C., Westerly, R. I.
1890. Paine, Clarence M., 67 N. Forsyth Street, Atlanta, Ga.
1850. PAINE, HORACE M., West Newton, Mass.
1853. PAINE, JOSEPH P., Hotel Eliot, Roxbury, Mass.
1890. Paine, Richard K., Manitowoc, Wis.
1877. Paine, N. Emmons, West Newton, Mass.
1891. Palmer, Anna Chipman, P. O. Box 19, Mattapan, Mass.
1892. Palmer, A. Worrall, 138 W. 81st Street, New York, N. Y.
1848. PALMER, MILES W., 235 E. 18th Street, New York, N. Y.
1892. Palmer, Owen A., Warren, O.
1897. Pannebaker, William Milton, 1103 Linden Avenue, Baltimore, Md.
1881. Pardee, Ensign B., 218 W. 34th Street, New York, N. Y.
1886. Pardee, Emily V. D., South Norwalk, Conn.
1895. Parker, Edwin Kenney, Littleton, N. H.
1897. Parker, Frank D., 101 Main Street, Akron, N. Y.
1891. Parker, James W., Warsaw, Ill.
1891. Parker, T. Elwood, Woodbury, N. J.
1896. Parkhurst, Alice S., 1410 Park Avenue, Baltimore, Md.
1883. Parsons, Anson, Springboro', Pa.
1888. Parsons, Edgar C., Meadville, Pa.
1879. Parsons, Katherine. 914 Prospect Street, Cleveland, O.
1897. Parsons, Thomas, 33 S. Clinton Street, Rochester, N. Y.
1873. PATCHEN, GEORGE H., 11 E. 59th Street, New York, N. Y.
1893. Patterson, H. S., Elkader, Ia.
1895. Patton, Hugh Mathewson, 125 Mansfield Street, Montreal, Can.
1895. Paul, C. Almon, Solon, Me.
1892. Paul, William Kendall, Belmont, N. Y.
1898. Paul, Irwin Nathaniel, Perry, Iowa.
1891. Pauly, C. A., Odd Fellows' Temple, Cincinnati, O.
1867. PAYNE, FREDERICK W., 162 Boylston St., Boston, Mass.
1860. PAYNE, JAMES H., 344 Commonwealth Avenue, Boston, Mass.
1893. Payne, John Howard, Pierce Building, Copley Square, Boston, Mass.
1895. Pearman, Sylvan, 633 E. Capitol Street, Washington, D. C.
1867. PEARSALL, S. J., Saratoga Springs, N. Y.
1892. Pearson, Mary M., 361 Massachusetts Avenue, Boston, Mass.
1895. Pease, Charles G., 101 W. 72d Street, New York, N. Y.
1895. Pease, Ella Gertrude, 214 Commonwealth Avenue, Boston, Mass.
1897. Peck, Frederic W., 42 Park Place, New Britain, Conn.
1898. Peck, Fred. Ed., 114 Main St., Cynthiana, Ky.
1879. Peck, George B., 865 N. Main Street, Providence, R. I.
1894. Peck, Grant S., 708 Fourteenth Street, Denver, Col.
1877. Penfield, Sophia, Danbury, Conn.
1870. PENNOYER, N. A., Kenosha, Wis.

1887. Percy, Frederick B., Brookline, Mass.
1887. Percy, George Emory, Salem, Mass.
1895. Perkins, Archie Elmer, South Ashburnham, Mass.
1895. Perkins, Charles Edwin, Warren, Mass.
1884. Perkins, Charles W., 403 Broad Street, Chester, Pa.
1890. Perkins, Ernest D., Ashland, Wis.
1886. Perkins, Wesley B., North High Street, Bridgton, Me.
1893. Perky, Lenore, 148 S. 12th Street, Lincoln, Neb.
1896. Perrine, J. K. M., 413 Penn Avenue, Pittsburg, Pa.
1898. Peterson, Alfred Cookman, 135 Geary Street, San Francisco, Cal.
1872. Pettengill, Eliza F., 300 N. 10th Street, Philadelphia, Pa.
1897. Pettet, Isabella Margaretha, 308 E. 15th Street, New York, N. Y.
1867. Phillips, Albert William, Birmingham, Conn.
1897. Phillips, Lincoln, 1104 McMillan Street, Walnut Hills, Cincinnati, O.
1896. Phillips, William A., 89 Euclid Avenue, Cleveland, O.
1890. Phillips, R. Oliver, 257 Warburton Avenue, Yonkers, N. Y.
1891. Pierce, Willard Ide, 64 W. 126th Street, New York, N. Y.
1893. Pierson, Herman W., 6600 Gale Street, Chicago, Ill.
1894. Pillsbury, Cassius C., Superior, Wis.
1889. Pillsbury, Charles B., Palladio Building, Duluth, Minn.
1880. Pitcairn, Hugh, Hamburg, Germany.
1898. Plimpton, Wm. Merrill, Glenwood, Iowa.
1894. Pollock, Joseph Robert, Fort Worth, Tex.
1895. Pollock, Martha Hayes, 232 N. 2d Street, Harrisburg, Pa.
1885. Pomeroy, Harlan, 526 Prospect Street, Cleveland, O.
1887. Pope, Willis G., Keeseville, N. Y.
1890. Poppele, Charles F., Mount Pulaski, Ill.
1887. Porter, Eugene H., 181 W. 73d Street, New York, N. Y.
1894. Posey, Louis Plumer, 1435 Walnut Street, Philadelphia, Pa.
1894. Powel, Milton, 163 W. 76th Street, New York, N. Y.
1888. Powell, William C., Bryn Mawr, Pa.
1894. Powers, A. Howard, 352 Massachusetts Avenue, Boston, Mass.
1874. Pratt, E. H., 100 State Street, Chicago, Ill.
1867. Pratt, Leonard, 520 N. 2d Street, San José, Cal.
1859. Pratt, Lester M., Homer, N. Y.
1891. Pratt, Trimble, Media, Pa.
1898. Prentis, Percy L., Delphos, Iowa.
1891. Price, Eldridge C., 1012 Madison Avenue, Baltimore, Md.
1867. Price, Elias C., 1012 Madison Avenue, Baltimore, Md.
1876. Price, Emmor H., 400 Georgia Avenue, Chattanooga, Tenn.
1892. Prilay, John M., 83 Essex Street, Bangor, Me.
1889. Primm, John W., Woodstock, Ill.
1896. Probert, Clarence G., 645 W. Madison Avenue, Cleveland, O.
1896. Pullen, Charles D., Mount Pleasant, Mich.
1895. Pulver, Hudson Josiah, 203 Main Street, Torrington, Conn.
1893. Pursell, James Perry, Easton, Pa.
1887. Putnam, William B., 34 Wilder Avenue, Hoosick Falls, N. Y.

1891. Quay, George H., 122 Euclid Avenue, East Cleveland, O.
1898 Quinby, Stillman Josiah, 318 So. 26th Street, Omaha, Neb.

1893. Raines, Taylor E., 6th and Broadway, Concordia, Kan.

1885. Rand, John Prentice, 74 Main Street, Monson, Mass.
1881. Rankin, Egbert G., 226 W. 59th Street, New York, N. Y.
1865. RANKIN, JOHN S., cor. Roup and Howe Avenues, Pittsburg, Pa.
1895. Rasmussen, Robert Ralph, Minneapolis, Minn.
1896. Rauterberg, Arthur C., 510 Fifth Street, N. W., Washington, D C.
1893. Ray, William L., 1214 Main Street, Kansas City, Mo.
1882. Ray, William R., 52 Collins Street, Melbourne, Australia.
1848. RAYMOND, JONAS C., 665 Sixteenth Street, Oakland, Cal.
1881. Reading, J. Herbert, 1811 Green Street, Philadelphia, Pa.
1888. Reading, Thomas, Hatboro', Pa.
1897. Redman, John Leifried, 1336 Spruce Street, Philadelphia, Pa.
1891. Reed, Clara D. W., 140 Church Street, Newton, Mass.
1897. Reed, William Emory, Washingtonville, N. Y.
1885. Reed, Robert G., Woonsocket, R. I.
1885. Reed, Thomas E., Middletown, O.
1894. Rees, Owen, 314 Erie Street, Toledo, O.
1888. Reeves, Joseph M., 1609 Mount Vernon Street, Philadelphia, Pa.
1893. Regan, M. R., Eureka Springs, Ark.
1896. Reid, Robert G., Fonda Block, Louisville, Ky.
1898. Reid, John Manley, Main Street, Centerview, Mo.
1897. Reilly, Walter E., Bowling Green, Mo.
1897. Reilly, William F., 1008 Madison Avenue, Covington, Ky.
1893. Reininger, Edward E., 353 S. Oakley Street, Chicago, Ill.
1898. Remington, Fred. A., Sioux City, Iowa.
1883. Renninger, John S., Marshall, Minn.
1891. Reynolds, Warren U., 320 Manhattan Avenue, New York, N. Y.
1846. RHEES, MORGAN J., Wheeling, W. Va.
1897. Rice, Alvin B., 117 Fairmont Avenue, Jamestown, N. Y.
1895. Rice, George Brackett, 229 Berkeley Street, Boston, Mass.
1892. Rice, Marvin S., Aurora, Ill.
1894. Rich, Frank, Toledo, Ohio.
1893. Rich, Frederick W., Riverside, Ill.
1886. Richard, George E., 44½ Bellevue Place, Chicago, Ill.
1891. Richards, George Herbert, Orange, N. J.
1887. Richards, Llewellyn B., Oswego, N. Y.
1896. Richards, R. Milton, 25 Washington Avenue, Detroit, Mich.
1890. Richardson, Andrew J., 39 E. 83d Street, New York, N. Y.
1872. RICHARDSON, B. M., 151 Milton Street, Brooklyn, N. Y.
1895. Richardson, Edward Blake, Chelsea and Corey Streets, Everett, Mass.
1886. Richardson, Frank C., 601 Boylston Street, East Boston, Mass.
1897. Richardson, George Henry, c|o S. A. K., Patton, Cal.
1891. Richardson, George W., 138 E. 79th Street, New York, N. Y.
1893. Richardson, Oscar K., 303 Masonic Temple, Minneapolis, Minn.
1876. Richardson, William C., 5359 Cabanne Avenue, St. Louis, Mo.
1891. Ricker, Marcena S., 58 Lannir Street, Rochester, N. Y.
1883. Ridge, Jonathan T., 1617 N. 7th Street, Philadelphia, Pa.
1897. Rieger, Joseph, 404 Central Avenue, Dunkirk, N. Y.
1887. Riggs, D. H., 1410 Eleventh Street, N. W., Washington, D. C.
1897. Rinehart, Stanley Marshall, 293 Western Avenue, Alleghany, Pa.
1893. Ripley, George H., Kenosha, Wis.
1889. Ripley, Martha G., 24 Tenth Street, South, Minneapolis, Minn.

1897. Roberts, Arthur Augustine, Willsburg, W. Va.
1891. Roberts, Charles Wesley, 638 Washington Avenue, Scranton, Pa.
1892. Roberts, David J., New Rochelle, N. Y.
1881. Roberts, George F., 604 Dayton Building, Minneapolis, Minn.
1891. Roberts, Grace, 1109 K Street, N. W., Washington, D. C.
1892. Roberts, George Watson, 1672 Broadway, New York, N. Y.
1890. Roberts, Susan A., Downer's Grove, Ill.
1889. Roberts, Thomas Elmer, 144 South Oak Park Ave., Chicago, Ill.
1897. Robertson, Herbert Miller, 64 Myrtle Street, Detroit, Mich.
1891. Robinson, Franklin E., Carthage, N. Y.
1866. Robinson, S. A., West New Brighton, N. Y.
1893. Roby, George F., 7 South Spring Street, Concord, N. H.
1890. Rockwell, Cortland B., 5401 Madison Avenue, Chicago, Ill.
1881. Rockwell, John A., Norwich, Conn.
1849. Rodman, William V., New Haven, Conn.
1891. Rogers, L. D., 441 Dearborn Ave., Chicago, Ill.
1894. Rogers, Rebecca W., 19 Marion Block, Indianapolis, Ind.
1886. Rollins, Charlotte A., Chelsea, Mass.
1897. Rolston, Rose Amanda, 52 High Street, Warren, O.
1895. Ross, Alice Idella, Whittier, Ia.
1893. Rotzell, Willett Enos, Narberth, Pa.
1882. Rosenberger, Abraham S., Covington, O.
1886. Rounsevel, C. Sedgwick, 211 Main Street, Nashua, N. H.
1891. Royal, George, 505 Walnut Street, Des Moines, Ia.
1897. Royal, T. Cook, 101 Milton Avenue, Ballston Spa, N. Y.
1897. Rudderow, Edward Douglas, 233 W. 83d Street, New York, N. Y.
1890. Rumsey, Charles Leslie, 819 Park Avenue, Baltimore, Md.
1875. Runnels, Moses T., 912 Walnut Street, Kansas City, Mo.
1873. Runnels, O. S., 203 N. Meridian Street, Indianapolis, Ind.
1887. Runnels, Sollis, 38 E. Ohio Street, Indianapolis, Ind.
1865. Rush, R. B., 70 E. Main Street, Salem, O.
1880. Rushmore, Edward, Plainfield, N. J.
1880. Russegue, Henry E., 93 Farmington Avenue, Hartford, Conn.
1892. Russell, H. Everett, 30 E. 74th Street, New York, N. Y.
1890. Russell, Henry A., West Superior, Wis.
1890. Rust, Edwin G., 29 Euclid Avenue, Cleveland, O.
1889. Rutledge, Samuel W., Grand Forks, N. Dak.

1891. Sage, Frederick H., Middletown, Conn.
1892. Sage, Henry P., 48 Howe Street, New Haven, Conn.
1896. Sage, Norman L., 680 Twenty-fourth Street, Detroit, Mich.
1869. Sage, William H., New Haven, Conn.
1894. Salisbury, Samuel Scott, Bradbury Building, Los Angeles, Cal.
1896. Sanborn, Emma M. E., 4 Morton Street, Andover, Mass.
1860. Sanders, John C., 608 Prospect Street, Cleveland, O.
1884. Sanders, J. Kent, 106 Euclid Avenue, Cleveland, O.
1890. Sanders, Orren B., 358 Commonwealth Avenue, Boston, Mass.
1859. Sanders, Orren S., 511 Columbus Avenue, Boston, Mass.
1867. Sanford, Charles E., Bridgeport, Conn.
1895. Sanger, Henry Mortimer, 1040 Westminster Street, Providence, R. I.
1871. Sartain, Harriet J., 212 West Logan Square, Philadelphia, Pa.

1867. SAWIN, ISAAC W., 582 Broadway, Providence, R. I.
1890. Sawtelle, Benjamin A., Norfolk, Conn.
1893. Sawyer, Charles E., Marion, O.
1898. Sawyer, Eugene W., cor. State and Washington Sts., Chicago, Ill.
1895. Saxton, Arthur W., Jackson, Mich.
1867. SCALES, EDWARD P., Newton, Mass.
1894. Schenck, Herbert Dana, 241 McDonough Street, Brooklyn, N. Y.
1875. Schley, James Montfort, 1 E. 42d Street, New York, N. Y.
1894. Schmitz, Elsie R., Milton, Wis.
1892. Schmucker, F. R., 228 N. 5th Street, Reading, Pa.
1897. Schneider, Adolph Benedict, 381 Jennings Avenue, Cleveland, O.
1894. Schneider, S. Newton, 210 Dearborn Avenue, Chicago, Ill.
1893. Schoonover, William Edward, Greeville, Pa.
1898. Schorr, Edward, Garden City, Mo.
1894. Schrader, Charles A., 1071 Sixth Street, San Diego, Cal.
1892. Schulze, Carl Andrew, 49 E. Main Street, Columbus, O.
1891. Schumann, Carl, Delhi, N. Y.
1891. Schwenk, Clayton S., 1319 Jefferson Street, Philadelphia, Pa.
1872. SCOTT, CHESTER W., Lawrence, Mass.
1895. Scott, Cyrus W., 90 Main Street, Andover, Mass.
1898. Scott, James Randolph, Malvern, Iowa.
1886. Scott, William H., 104 W. 44th Street, New York, N. Y.
1897. Sears, M. Maywood, 95 S. Main Street, Ann Arbor, Mich.
1891. Seibert, William A., Easton, Pa.
1897. Seip, Charles Lewis, 299 Union Street, New Bedford, Mass.
1869. SEIP, C. P., 636 Penn Avenue, Pittsburg, Pa.
1895. Seitz, William Clinton, Glen Rock, Pa.
1897. Seward, Frederick W., Main Street, Goshen, Orange County, N. Y
1894. Seward, John Perry, 113 W. 85th Street, New York, N. Y.
1847. SHACKFORD, RUFUS, Portland, Me.
1879. Shannon, Samuel F., 711 Seventeenth Street, Denver, Col.
1895. Shapleigh, Alfred Lindsay, 38 Pleasant Avenue, Worcester, Mass.
1892. Sharetts, Upton A., Frederick, Md.
1895. Sharpless, Edward S., 1329 N. 12th Street, Philadelphia, Pa.
1894. Shaw, John Cook, 23 S. Sixth Street, New Bedford, Mass.
1895. Shaw, John Joseph, 14 Brewster Street, Plymouth, Mass.
1867. SHEARER, THOMAS, 345 N. Charles Street, Baltimore, Md.
1890. Shearer, Thomas L., 345 N. Charles Street, Baltimore, Md.
1882. Shears, George F., 3130 Indiana Avenue, Chicago, Ill.
1870. SHELDON, J. W., 402 Warren Street, Syracuse, N. Y.
1893. Shellenberger, Charles Nell, 1831 Wallace Street, Philadelphia, Pa.
1886. Shelton, George G., 521 Madison Avenue, New York, N. Y.
1895. Shepard, George Andrew, 1672 Broadway, New York, N. Y.
1891. Shepard, Jessie, 21 Irving Place, Buffalo, N. Y.
1889. Shepard, William A., Elgin, Ill.
1898. Sheridan, Wm. M., Florence, Col.
1859. SHERMAN, JOHN H., 534 Broadway, Boston, Mass.
1894. Sherman, Irving Prescott, 114 W. 44th Street, New York, N. Y.
1875. Sherman, Lewis, 171 Wisconsin Street, Milwaukee, Wis.
1889. Sherman, Nancy B., Kalamazoo, Mich.
1879. Sherman, Sarah E., 11 Barton Square, Salem, Mass.

1897. Sherwood, Bradford Wyckoff, 1117 S. Salina Street, Syracuse, N. Y.
1882. Sherwood, Herbert A., Warren, O.
1871. SHIVERS, BOWMAN H., Haddonfield, N. J.
1892. Shoemaker, George L., Nappanee, Ind.
1898. Shoemaker, Chas. A., 503 S. Eleventh Street, Lincoln, Neb.
1891. Shreve, Joseph, Burlington, N. J.
1897. Simmons, Clarence W., 1628 N. 18th Street, Philadelphia, Pa.
1881. Simmons, Daniel, 97 Lee Avenue, Brooklyn, N. Y.
1888. Simmons, Silas S., Susquehanna, Pa.
1881. Simon, Samuel H., 71 Orange Street, Brooklyn, N. Y.
1894. Simpson, William, 142 N. 3d Street, San José, Cal.
1896. Sigrist, Christopher W., 31 S. Fifth Street, Columbus, O.
1896. Sigrist, Philip H., E. High Street, New Philadelphia, O.
1896. Sinclair, Duncan J., 450 Dundas Street, Woodstock, Ont.
1896. Sinclair, Malcolm C., 124 Sheldon Street, Grand Rapids, Mich.
1854. SISSON, EDWARD R., New Bedford, Mass.
1889. Skiles, Hugh P., 963 W. Monroe Street, Chicago, Ill.
1853. SKILES, FRANCIS W., Suffolk, Va.
1889. Skinner, Scott W., Le Roy, N. Y.
1883. Slaught, James E., Warsaw, N. Y.
1891. Sleght, B. H. B., 31 Lincoln Park, Newark, N. J.
1896. Slocomb, George A., 804 Main Street, Worcester, Mass.
1876. Slough, Frank J., Allentown, Pa.
1888. Slough, William C. J., Emaus, Pa.
1897. Small, Charles Kendall, 319 North Fourth Street, Burlington, Iowa.
1894. Smedley, Charles Davis, Wayne, Pa.
1897. Smedley, Isaac G., 1705 Arch Street, Philadelphia; Pa.
1873. SMITH, CHESTER, Portland, Mich.
1896. Smith, C. C., Bedford, Mich.
1896. Smith, Dean T., 302 N. Elm Avenue, Jackson, Mich.
1896. Smith, Dudley, 1834 South Logan Square, Philadelphia, Pa.
1893. Smith, Espy L., 974 W. Polk Street, Chicago, Ill.
1895. Smith, Frederick R., 400 E. Main Street, Rochester, N. Y.
1891. Smith, George R., Dover, N. H.
1860. SMITH, HENRY M., 288 St. Nicholas Avenue, New York, N. Y.
1869. SMITH, J. HEBER, 279 Dartmouth Street, Boston, Mass.
1882. Smith, Julia Holmes, 100 State Street, Chicago, Ill.
1896. Smith, Mark H., Peavland, Tex.
1887. Smith, Melvin D., Middlebury, Vt.
1885. Smith, Norman Pitt, Paris, Ill.
1893. Smith, Orrin L., 47th Street and Greenwood Avenue, Chicago, Ill.
1890. Smith, Sarah, Council Bluffs, Ia.
1886. Smith, Sarah N., Stillwater, N. Y.
1869. SMITH, ST. CLAIR, 25 W. 50th Street, New York, N. Y.
1860. SMITH, T. FRANKLIN, 264 Lenox Avenue, New York, N. Y.
1889. Smith, Wilson A., 7022 Vernon Avenue, Chicago, Ill.
1894. Smith, Winfield Scott, 601 Boylston Street, Boston, Mass.
1894. Smythe, Samuel Scales, cor. California and 17th Streets, Denver, Col.
1891. Snader, Edward R., 140 N. 20th Street, Philadelphia, Pa.
1894. Snow, Henry, Norwood, O.
1887. Snyder, Edward E., Binghamton, N. Y.

1898. Snyder, Susan McGlaughlin, 121 S. Seventh St., Council Bluffs, Iowa.
1897. Sommer, Henry Otto, 330 A Street, S. E., Washington, D. C.
1891. Sooy, Walter C., 1913 Pacific Avenue, Atlantic City, N. J.
1897. Southall, Edward W., Geneseo, N. Y.
1871. SOUTHWICK, AUGUSTUS B., 107 West Liberty Street, Rome, N. Y.
1888. Southwick, George R., 31 Massachusetts Avenue, Boston, Mass.
1869. SPALDING, HENRY E., "The Cluny," Boston, Mass.
1895. Spalding, Julia H., 39 N. Main Street, Cortland, N. Y.
1892. Spaulding, Samuel H., Hingham, Mass.
1859. SPARHAWK, GEORGE E. E., Burlington, Vt.
1895. Spencer, George Frederick Allen, 40 Church Street, Ware, Mass.
1891. Spencer, William, 1820 Chestnut Street, Philadelphia, Pa.
1897. Spencer, William Francis, Geneseo, Ill.
1875. Spinney, Andrew B., Reed City, Mich.
1898. Spooner, Henry Miner, Providence, R. I.
1887. Spoor, David E., Grand Junction, Col.
1893. Sprague, Charles G., Beatrice, Neb.
1892. Spranger, M. J., Detroit, Mich.
1882. Spreng, T. F. H., Sioux City, Ia.
1895. Squire, Abiram F., 38 Catherine Street, Newport, R. I.
1895. Stafford, Walter W., 101 Twenty-fourth Street, Chicago, Ill.
1897. Stambach, Ida V., 1509 State Street, Santa Barbara, Cal.
1895. Stanton, Nathaniel Greene, 9 Kay Street, Newport, R. I.
1891. Stark, Clinton E., Norwich, Conn.
1890. Starr, Pearl, Bellevue, Pa.
1897. Starry, Clark N., Louisburg, Kan.
1892. Stauffer, Alvin Packer, Hagerstown, Md.
1897. Stearns, George Raynolds, 207 Linwood Avenue, Buffalo, N. Y.
1896. Stearns, John S., 1425 Rhode Island Avenue, N. W., Washington, D. C.
1891. Stearns, Solomon S., 1425 Rhode Island Ave., N. W., Washington, D. C.
1892. Stearns, William M., 34 Washington Street, Chicago, Ill.
1892. Steddon, Charles, Monroe, O.
1889. Stephens, Aaron M., 431 Fourth Street, Red Wing, Minn.
1892. Stephens, James Arthur, 1350 Euclid Avenue, Cleveland, O.
1898. Stephenson, Benj. Swift, 49 Kirk Street, Lowell, Mass.
1893. Stem, Henry L., Union City, Pa.
1896. Sterling, Charles F., 396 Jefferson Avenue, Detroit, Mich.
1891. Stettler, Cornelia S., 181 Dearborn Avenue, Chicago, Ill.
1892. Stevens, David D., "Ariston," 1770 Broadway, New York, N. Y.
1896. Stevens, Mary T., 6 Adams Avenue, W. Detroit, Mich.
1896. Stevens, Rollin H., 6 Adams Avenue, W. Detroit, Mich.
1897. Stewart, Ambrose Cecil, P. O. Box 640, Durango, Col.
1896. Stewart, Francis E., 106 Charlotte Street, Detroit, Mich.
1897. Stewart, George Taylor, Metropolitan Hospital, New York, N. Y.
1891. Stewart, John W. G., Wabash, Ind.
1896. Stewart, Lincoln A., Brooksville, Me.
1894. Stewart, Mary E., Topeka, Kan.
1895. Stiles, Charles Wallace, 17 Rawena Street, Ashmeat, Mass.
1890. Stiles, Frederick P., Sparta, Wis.
1895. Stiles, Hunter Bell, Grand Avenue, Gainesville, Tex.
1879. Stone, Martha M., 104 Prospect Street, Cleveland, O.

1887. Stone, Waldo H., 133 Orms Street, Providence, R. I.
1895. Storer, John Hudson, 30 Edgecombe Avenue, New York, N. Y.
1880. Storke, Eugene F.
1882. Stout, Henry R., Jacksonville, Fla.
1892. Stratton, Wallace C., 2255 Mission Street, San Francisco, Cal.
1892. Straub, Effie Therese, 922 N. Clarke Street, Chicago, Ill.
1891. Strawbridge, Frank A., Sigourney, Ia.
1871. STREETS, JACOB G., Bridgeton, N. J.
1869. STREETER, JOHN W., 2001 Prairie Avenue, Chicago, Ill.
1889. Strickler, David A., 705 Fourteenth Street, Denver, Col.
1880. Strong, Thomas M., 176 Huntington Avenue, Boston, Mass.
1883. Stumpf, Daniel B., 631 Ellicott St., Buffalo, N. Y.
1890. Sturtevant, Myron C., Morris, Ill.
1892. Stutz, J. A., Fort Wayne, Ind.
1892. Styles, Elmer S., New Britain, Conn.
1891. Suffa, George A., 229 Berkeley Street, Boston, Mass.
1897. Summer, Charles Oliver, 4 Park Street, Norwood, N. Y.
1881. Sumner, Charles R., Rochester, N. Y.
1887. Sutherland, John Preston, 295 Commonwealth Avenue, Boston, Mass.
1890. Sutherland, Quincy O., Janesville, Wis.
1890. Suttle, H. J., Viroqua, Wis.
1880. Swain, Mary L., 2 Commonwealth Avenue, Boston, Mass.
1887. Swalm, Thomas W., Pottsville, Pa.
1895. Swan, Charles J., 34 Washington Street, Chicago, Ill.
1896. Swartwout, F. A., 810 Eleventh Street, N. W., Washington, D. C.
1879. Swartz, J. Ross, Harrisburg, Pa.
1898. Sweet, E. C., 70 State Street, Chicago, Ill.
1887. Swett, Emily F., Medina, N. Y.
1897. Swift, Arthur Wesley, 501 State Street, Belvidere, Ill.
1891. Swormstedt, Lyman B., 1455 Fourteenth St., N. W., Washington, D. C.
1895. Sylvester, Stephen Alden, Beacon Street, Newton Centre, Mass.

1888. Talbot, George H., Newtonville, Mass.
1853. TALBOT, I. TISDALE, 687 Boylston Street, Boston, Mass.
1890. Talbot, Winthrop Tisdale, 687 Boylston Street, Boston, Mass.
1874. Talcott, Selden H., Middletown, N. Y.
1890. Talmage, Alonzo L., Waterloo, N. Y.
1872. TALMAGE, JOHN F., 157 Joralemon Street, Brooklyn, N. Y.
1897. Taylor, Alfred H., 485 H Street, S. W., Washington, D. C.
1898. Taylor, Edwin A., 100 State Street, Chicago, Ill.
1875. Taylor, Esther W., 226 Ferry Street, Malden, Mass.
1882. Taylor, Theodore H., Evansville, Ind.
1892. Teets, Charles E., 37 W. 39th Street, New York, N. Y.
1892. Telson, Mary K.
1894. Tennant, Chauncey E., 2061 Curtis Street, Denver, Col.
1875. Terry, Marshall O., 196 Genesee Street, Utica, N. Y.
1889. Thatcher, John Thomas, Oregon, Mo.
1890. Thomas, Charles H., 427 Broadway, Cambridge, Mass.
1891. Thomas, Charles H., 1312 N. Charles Street, Baltimore, Md.
1875. Thomas, Charles M., 1623 Arch Street, Philadelphia, Pa.
1887. Thome, Arthur G., 133 Lincoln Avenue, Chicago, Ill.

1898. Thomasson, John Clay, 214 Main Street, Georgetown, Ky.
1888. Thompson, Charles S. W., Helena, Mont.
1887. Thompson, James Henry, 515 Penn Avenue, Pittsburg, Pa.
1890. Thompson, Jay J., 707 Marshall Field Building, Chicago, Ill.
1867. THOMPSON, JOHN H., 36 E. 30th Street, New York, N. Y.
1887. Thompson, Landreth W., 1701 Green Street, Philadelphia, Pa.
1891. Thompson, Mark M., 805 W. Monroe Street, Chicago, Ill.
1867. THOMPSON, VIRGIL, 56 W. 21st Street, New York, N. Y.
1891. Thompson, Will Sylvester, 134 State Street, Augusta, Me.
1895. Thurber, Emily M., 170 Broad Street, Providence, R. I.
1887. Tobey, Walter Henry, 173 Newbury Street, Boston, Mass.
1897. Tomlin, Richard Elmer, 2057 N. 8th Street, Philadelphia, Pa.
1891. Tomlinson, William H., 44 E. Walnut Lane, Germantown, Phila., Pa.
1885. Tompkins, Albert H., 20 Seavern's Ave., Jamaica Plain, Boston, Mass.
1879. Tooker, Robert N., 263 Dearborn Avenue, Chicago, Ill.
1891. Townsend, Irving, 67 W. 46th Street, New York, N. Y.
1890. Treat, Charles R., Jr., Sharon, Wis.
1890. Tremaine, Orlando G., 3977 Cottage Grove Avenue, Chicago, Ill.
1896. Triem, Peter E., cor. Main and Madison Streets, Manchester, Ia.
1888. Trotter, Richard R., 189 Warburton Avenue, Yonkers, N. Y.
1895. Troutman, George D., 210 W. Chestnut Street, Louisville, Ky.
1888. Tucker, Genevieve, Pueblo, Col.
1892. Tuller, John J., 1923 Chestnut Street, Philadelphia, Pa.
1894. Turbin, Louis M., 103 State Street, Chicago, Ill.
1896. Turner, Estelle.
1892. Turner, Maurice W., 127 Harvard Street, Brookline, Mass.
1896. Tuthill, Frank S., Concord, Mich.
1891. Tuttle, Edward G., 61 W. 51st Street, New York, N. Y.
1895. Tuttle, Walter, Court Street, Exeter, N. H.
1881. Tytler, George E., 113 W. 126th Street, New York, N. Y.

1881. Uebelacker, Armin E., 109 South Street, Morristown, N. J.
1891. Ullery, Arthur O., Niles, Mich.
1892. Upham, Ella Prentiss, Asbury Park, N. J.

1897. Valentine, Richard K., 33 Eighth Avenue, Brooklyn, N. Y.
1889. Van Baun, William W., 1402 Spruce Street, Philadelphia, Pa.
1887. Van Denburg, M. W., Fort Edward, N. Y.
1889. Van den Burg, William H., 1 E. 42d Street, New York, N. Y.
1895. Vander Burgh, David W., 320 Rock Street, Fall River, Mass.
1891. Van Deusen, Edwin H., 2105 Tioga Street, Philadelphia, Pa.
1894. Van Lennep, Gustave Adolphe, 1421 Spruce Street, Philadelphia, Pa.
1886. Van Lennep, William B., 1421 Spruce Street, Philadelphia, Pa.
1895. Van Loon, Arthur Burton, 50 Eagle Street, Albany, N. Y.
1873. VAN NORMAN, E. V., 545 South Broadway, Los Angeles, Cal.
1870. VAN NORMAN, H. B., 289 Pearl Street, Cleveland, O.
1897. Vansant, John Thomas, Paris, Ky.
1897. Van Scoyoc, Lloyd G., 1103 Main Street, Kansas City, Mo.
1876. Van Vleck, Peter H., Sturgis, Mich.
1896. Vehslage, Samuel H., 117 W. 43d Street, New York, N. Y.
1891. Ver Nooy, Charles, 146 W. 64th Street, New York, N. Y.
1858. VERDI, TULLIO S., 11 Via delle Officine, Florence, Italy.

1895. Verges, W. F., 901 Prospect Avenue, Norfolk, Neb.
1889. Vidal, James W., Fargo, N. Dak.
1877. Vilas, Charles H., Central Music Hall, Chicago, Ill.
1891. Vischer, Carl V., 1429 Poplar Street, Philadelphia, Pa.
1881. Vishno, Charles, 361 Orange Street, New Haven, Conn.
1895. Von der Lühe, Amelia D. F., 801 Driggs Avenue, Brooklyn, N. Y.

1897. Wage, John F., 414 Seneca Street, Buffalo, N. Y.
1889. Wagner, Charles Henry, Faribault, Minn.
1893. Wagner, Philippina, Carson City, Nev.
1895. Wait, Oliver Babcock, 1230 S. 57th Street, Philadelphia, Pa.
1874. Wait, Phœbe J. B., 9th Avenue cor. 34th Street, New York, N. Y.
1897. Waite, Kent B., 176 Euclid Avenue, Cleveland, O.
1895. Walker, Frank Clifford, 108 High Street, Taunton, Mass.
1888. Walker, James M., 1257 Broadway, Denver, Col.
1891. Walrad, Caleb B., 21 N. Perry Street, Johnstown, N. Y.
1893. Walter, Robert, Walter's Park, Pa.
1872. WALTER, ZIBA D., 107 W. Seventh Street, Pueblo, Col.
1874. Walton, Charles E., N. W. cor. 7th and John Streets, Cincinnati, O.
1883. Wanstall, Alfred, 921 Cathedral Street, Baltimore, Md.
1889. Ward, Florence N. Saltonstall, "The Wenban," 606 Sutter Street, San Francisco, Cal.
1883. Ward, James W., "The Wenban," 606 Sutter St., San Francisco, Cal.
1891. Ward, John McE., 1915 Susquehanna Avenue, Philadelphia, Pa.
1896. Ward, William R., Lyons Farms, N. J.
1869. WARE, WILLIAM G., Dedham, Mass.
1898. Waring, Guernsey P., 1106 Stewart Bldg., Chicago, Ill.
1898. Warner, Alton G., 194 Schermerhorn Street, Brooklyn, N. Y.
1873. WARREN, H. ANNA, 817 Bond Street, Dennison, Tex.
1872. WARREN, JOHN K., 68 Pleasant Street, Worcester, Mass.
1892. Washburn, Julia, 91 East High Street, Lexington, Ky.
1873. WATERS, MOSES H., 126 N. Seventh Street, Terre Haute, Ind.
1893. Watry, Joseph, Central Music Hall, Chicago, Ill.
1854. WATSON, WILLIAM H., 270 Genesee Street, Utica, N. Y.
1891. Watts, Pliny R., 1222 Tenth Street, Sacramento, Cal.
1893. Watts, William, 339 Huron Street, Toledo, O.
1894. Waylan, Julia Gould, 1832 Tioga Street, Philadelphia, Pa.
1894. Wayland, Charles A., Porter Building, San José, Cal.
1882. Weaver, Chandler, Fox Chase P. O., Philadelphia, Pa.
1892. Webner, Henry W., 723 W. Lombard Street, Baltimore, Md.
1881. Webster, Frank P., 136 Freemason Street, Norfolk, Va.
1893. Webster, Samuel C., 99 High Street, Westerly, R. I.
1891. Weirick, Clement A., 100 State Street, Chicago, Ill.
1888. Welch, George Oakes, Fergus Falls, Minn.
1889. Welker, J. Wesley, Englewood, Ill.
1892. Wellington, James Fremont, 64 E. 2d Street, Corning, N. Y.
1896. Wells, George S., Sistersville, W. Va.
1897. Wessel, P. H., 517 Fifteenth Street, Moline, Ill.
1859. WESSELHOEFT, CONRAD, 291 Boylston Street, Boston, Mass.
1867. WESSELHOEFT, WALTER, 391 Harvard Street, Cambridge, Mass.
1894. Wesselhoeft, William Fessenden, 851 Boylston Street, Boston, Mass.

1859. WESSELHOEFT, WILLIAM P., 176 Commonwealth Avenue, Boston, Mass.
1889. Westover, H. W., 7th and Edward Streets, St. Joseph, Mo.
1858. WEST, EDWIN, 155 W. 12th Street, New York, N. Y.
1866. WETMORE, JOHN McE., 41 E. 29th Street, New York, N. Y.
1898. Wheeler, Byron A., 1441 Stout Street, Denver, Col.
1898. Wherry, Curtis A., Marshall, Mo.
1882. Whipple, Alfred A., 637 Main Street, Quincy, Ill.
1897. White, A. Grace, 87 Main Street, Bradford, Pa.
1893. White, John T., 29 S. State Street, Salt Lake City, Utah.
1887. White, Roland T., 273 Western Avenue, Allegheny, Pa.
1860. WHITE, THEODORE C., 21 S. Clinton Street, Rochester, N. Y.
1893. White, William Seymour, 70 State Street, Chicago, Ill.
1888. Whiting, Walter B., Malden, Mass.
1890. Whitman, Frank S., Belvidere, Ill.
1888. Whitmarsh, Henry A., Jackson Street, Providence, R. I.
1898. Whitmore, Frank Beach, 632 W. Congress Street, Chicago, Ill.
1896. Wiggers, Henry H., 529 Everett Street, Cincinnati, O.
1881. Wilberton, Lawrence G., Winona, Minn.
1891. Wilbur, Bertrand K., The Indian Training School, Sitka, Alaska.
1883. Wilcox, De Witt G., 568 Delaware Avenue, Buffalo, N. Y.
1885. Wilcox, Mrs. H. Tyler, Chicago, Ill.
1889. Wilcox, Catharine, Endicott Arcade, St. Paul, Minn.
1886. Wilcox, Sidney Freeman, 51 W. 52d Street, New York, N. Y.
1897. Wilder, Carlton V., 4 West 5th Street, Atlantic, Iowa.
1895. Wilder, Guert Elmore, Masonic Temple, Sandusky, O.
1855. WILDER, LOUIS DE V., 55 W. 33d Street, New York, N. Y.
1891. Wiley, Rebecca W., 160 Main Street, Laconia, N. H.
1886. Wilkins, George H., Palmer, Mass.
1896. Willard, Mary A., 142 W. High Street, Detroit, Mich.
1867. WILLARD, L. H., 236 Western Avenue, Alleghany, Pa.
1893. Willard, William G., 544 Washington Boulevard, Chicago, Ill.
1895. Williams, Carl A., 8 Broad Street, New London, Conn.
1893. Williams, Frank Fay, 6 Goodrich Street, Canton, N. Y.
1891. Williams, Franklin E., Haddonfield, N. J.
1876. Williams, Nancy T., Winthrop Court, Augusta, Me.
1892. Williams, Perry C., Texarkana, Tex.
1898. Williams, Mary Cowen, 2909 Portland Avenue, Louisville, Ky.
1876. Williamson, Alonzo P., 502 Nicollet Avenue, Minneapolis, Minn.
1872. WILLIAMSON, MATTHEW S., 1311 Arch Street, Philadelphia, Pa.
1892. Willis, Harrison, 695 Lafayette Avenue, Brooklyn, N. Y.
1894. Wilson, Charles Gaston, 203 Main Street, Clarksville, Tenn.
1859. WILSON, GROVE H., Meriden, Conn.
1876. Wilson, Joseph H., Bellefontaine, O.
1873. WILSON, MATTHEW T., 1170 Market Street, San Francisco, Cal.
1865. WILSON, T. P., 132 Arlington Street, Cleveland, O.
1892. Winchell, Walter B., 137 Berkley Place, Brooklyn, N. Y.
1894. Winn, William John, 6 Ash Street, Cambridge, Mass.
1897. Winship, Annette Thomas, 517 Prospect Street, Cleveland, O.
1896. Wise, Julius C., 14 W. 12th Street, Kansas City, Mo.
1895. Wisner, Jacob Ward, 2111 St. Paul Street, Baltimore, Md.
1886. Wolcott, Edwin H., 57 S. Union Street, Rochester, N. Y.

1897. Wolcott, Roy C., St. Paris, Ohio.
1886. Wood, James C., 122 Euclid Avenue, Cleveland, O.
1895. Wood, Lorin Francis, 37 Elm Street, Westerly, R. I.
1895. Wood, Nelson Mervin, 71 Elm Street, Charleston, Mass.
1860. WOOD, ORLANDO S., 521 N. Y. L. Building, Omaha, Neb.
1898. Woodburn, Wm., 609 Walnut Street, Des Moines, Iowa.
1898. Woodbury, Ernest I., 212 No. Fourth Street, Burlington, Iowa.
1870. WOODBURY, WILLIAM H., 22 Central Music Hall, Chicago, Ill.
1896. Woodruff, William L., N. W. c. 2d Ave. and Jefferson St., Phœnix, Ariz.
1870. WOODWARD, ALFRED W., 130 Ashland Avenue, Chicago, Ill.
1869. WOODWARD, A. M., 128 W. 13th Street, New York, N. Y.
1891. Woodward, George D., 211 Broadway, Camden, N. J.
1895. Worcester, Frank D., Keene, N. H.
1888. Worcester, George W., Newburyport, Mass.
1895. Worcester, John Fonerden, 90 Church Street, Clinton, Mass.
1897. Worley, Howard A., Continental Block, Omaha, Neb.
1872. WORCESTER, SAMUEL, 31 Winter Street, Portland, Me.
1893. Worthen, Lewis J., Paola, Kan.
1869. WRIGHT, ALBERT R., 414 Elmwood Avenue, Buffalo, N. Y.
1891. Wright, George H., Forest Glen, Md.
1881. Wrisley, John A., Lakeport, N. H.
1881. Wyman, Edmond L., Manchester Centre, Vt.

1881. Yoder, Daniel, Catasauqua, Pa.
1891. Young, Charles B., 1102 Church Street, Lynchburg, Va.
1892. Young, E. Weldon, 1023 Columbia Street, Seattle, Wash.
1897. Young, William Dickson, 29 Park Street, Buffalo, N. Y.
1886. Youngman, Maurice D., 1618 Pacific Avenue, Atlantic City, N. J.

1898. Ziegenfus, A. Frank, 1124 Wallace Street, Philadelphia, Pa.
1897. Zwetsch, J. D., Main Street, Gowanda, N. Y.

Corresponding Members.

1873. Tommaso Cigliano, M.D., Naples, Italy.
1876. W. Albert Haupt, M.D., Chemnitz, Saxony, Germany.
1876. John W. Hayward, M.D., 61 Shrewsbury Road, Birkenhead, Cheshire, England.
1876. Arthur C. Clifton, M.D., 9 Park Parade, Northampton, England.
1876. Thomas Skinner, M.D., 6 York Place, London, W., England.
1879. Alfred C. Pope, M.D., Grantham, England.
1882. A. Claude, M.D., 43 Rue de Caumartin, Paris, France.
1885. Edward Blake, M.D., 65 Seymour Street, Hyde Park, W., England.
1889. Mohendra Lal Sircar, M.D., Calcutta, India.
1889. B. N. Banerjee, M.D., 34½ Beadon Street, Calcutta, India.
1891. Alexander Villers, M.D., Dresden, Saxony, Germany.
1891. D. Dyce Brown, M.D., 29 Seymour St., Portman Sq., London, W., Eng.
1891. Leopold Salzer, M.D., 6 Loudon Street, Calcutta, India.
1892. Frederick Delosea, M.D., Frankfort, Germany.
1892. August Grünewald, M.D., Frankfort, Germany.
1893. Alfred E. Hawkes, M.D., Liverpool, England.
1893. J. Cavendish Molson, M.D., 57 Brook St., Grosvenor Sq., London, Eng.

1893. Oscar Hansen, M.D., Copenhagen, Denmark.
1893. P. C. Majundar, M.D., Calcutta, India.
1893. E. Vernon, M.D., Toronto, Ont.
1895. U. C. Bagchi, M.D., Calcutta, India.
1895. C. S. Kali, M.D., L.M.S., Calcutta, India.
1897. Franz Erwein, M.D., Mainz, Germany.
1897. E. Mersch, M.D., Brussels, Belgium.
1897. Ernest Nyssers, M.D., Brussels, Belgium.

Honorary Members.

1876. P. Jousset, M.D., Paris, France.
1876. R. E. Dudgeon, M.D., 53 Montague Square, London, W., England.
1877. Richard Hughes, M.D., Brighton, England.
1892. Theodore Kafka, M.D., Karlsbad, Germany.

Honorary Associate Members.

1879. Mrs. Elizabeth Thompson, New York, N. Y.
1883. Prof. N. B. Wood, Cleveland, O.
1887. Mrs. Emily Talbot, Hotel Cluny, Boston, Mass.
1893. Madame Olga Bojanus, Samara, Russia.

List of Members Classified by States.

Alabama.

1892. Ballard, Asa N., 2020 Third Avenue, Birmingham.
1892. Duffield, Alfred M., 307 Clinton Street, Huntsville.

Alaska.

1891. Wilbur, Bertrand K., Sitka.

Arizona.

1891. Jones, A. Cuvier, Tucson.
1896. Woodruff, Wm. L., N. W. cor. Second Ave. and Jefferson St., Phœnix.

Arkansas.

1894. Brooks, Ida Josephine, 219 E. 10th Street, Little Rock.
1891. Daily, John C., 117 E. Jefferson Street, Fort Smith.
1881. Dake, Charles, Hot Spring.
1887. Dake, Frank B., Hot Springs.
1882. Green, William E., Little Rock.
1896. Hallman, Victor H., 606½ Central Avenue, Hot Springs.
1867. Mason, J. R., Devall's Bluff.
1893. Regan, M. R., Eureka Springs.

Australia.

1882. Ray, William R., 52 Collins Street, Melbourne.

California.

1867. Albertson, J. A., 119 Powell Street, San Francisco.
1883. Ballard, Laura A. S., 610 Hyde Street, San Francisco.
1869. Bishop, Herbert M., 436 Bradbury Building, Los Angeles.
1883. Boericke, William, 1812 Washington Street, San Francisco.
1895. Bryant, Edgar Reeve, 317 Powell Street, San Francisco.
1894. Campbell, Eugene, Rooms 627-629, Laughlin Bldg., 315 S. Broadway, Los Angeles.
1874. Campbell, Merritt B., Patton.
1895. Campbell, Robert Alexander, Ontario.
1894. Canney, Frederick G., 606 Sutter Street, San Francisco.
1889. Chamberlin, Myron H., Monrovia.
1867. Currier, Christopher B., 921½ Geary Street, San Francisco.
1869. De Derkey, F. F., 311 W. 3d Street, Los Angeles.

1887. Docking, Thomas, 164 Boston Avenue, San Diego.
1891. Dolan, A. Stanley, Patton.
1876. Eckel, John N., 2711 Sacramento Street, San Francisco.
1875. French, Hayes C., Y. M. C. A. Building, San Francisco.
1857. HATCH, PHILO L., 1901 San Pascual Street, Santa Barbara.
1867. HILL, ROBERT L., 564 Fourteenth Street, Oakland.
1897. Hodge, Jacob Sylvester, Raymond Ave. & Green St., Pasadena.
1889. Howe, Willella, Santa Anna.
1898. Hurd, Laura B., 745 Guererro Street, San Francisco.
1876. Johnson, Maria N., 963 Orange Street, Los Angeles.
1892. Johnson, Thaddeus L., Pomona.
1893. Keith, William E., San José.
1890. Kirkpatrick, John C., 328 W. 3d Street, Los Angeles.
1888. Lee, Sarah Idella.
1887. Macomber, H. K., Pasadena.
1893. Martin, Eleanor Frances, 606 Sutter Street, San Francisco.
1889. Martin, George H., 606 Sutter Street, San Francisco.
1898. Peterson, Alfred C., 135 Geary Street, San Francisco.
1867. PRATT, LEONARD, 520 N. 2d Street, San José.
1848. RAYMOND, JONAS C., 665 Sixteenth Street, Oakland.
1897. Richardson, George Henry, c/o S. A. K., Patton.
1894. Salisbury, Samuel Scott, Bradbury Building, Los Angeles.
1894. Schrader, Charles A., 1071 Sixth Street, San Diego.
1894. Simpson, William, 142 N. 3d Street, San José.
1897. Stambach, Ida V., 1509 State Street, Santa Barbara.
1892. Stratton, Wallace C., 2255 Mission Street, San Francisco.
1873. VAN NORMAN, E. V., 545 S. Broad Street, Los Angeles.
1889. Ward, Florence N. Saltonstall, 606 Sutter Street, San Francisco.
1883. Ward, James W., 606 Sutter Street, San Francisco.
1891. Watts, Pliny R., 1222 Tenth Street, Sacramento.
1894. Wayland, Charles A., Porter Building, San José.
1873. WILSON, MATTHEW T., 1170 Market Street, San Francisco.

Canada.

1896. Anderson, Jeremiah N., 5 College Street, Toronto, Ont.
1891. Clark, Charles W., 21 Princess Street, Winnipeg, Manitoba.
1897. Clark, George F., Aylmer, Elgin Co.
1895. Griffith, Alexander Randall, 535 Wellington Street, Montreal.
1897. Müller, Laura, 213 Stanley Street, Montreal, Canada.
1895. Patton, Hugh Mathewson, 125 Mansfield Street, Montreal.
1896. Sinclair, Duncan J., 450 Dundas Street, Woodstock, Ontario.

Chili, S. A.

1889. Hoover, Willis C., Iquique.

Colorado.

1893. Anderson, John Wylie, 1617 Steele Block, Denver.
1894. Brace, Charles C., 1427 Stout Street, Denver.
1893. Brooks, William F., Florence.

1898. Burg, William S., 404 California Bldg., Denver.
1889. Burnham, Norman G., Denver.
1893. Burr, William Alton, 2010 Welton Street, Denver.
1891. Clark, Edwin J., Longmont.
1886. Cooke, Persifor Marsden, 1290 Race Street, Denver.
1894. Couden, William Chase, 29 Eighteenth Avenue, Denver.
1894. Dodge, Horace Tennent, 28th and Downing Avenues, Denver.
1898. Goff, Sarah A., Harrison and Ninth Streets, Cañon City.
1898. Howe, Warren D., 831 Main Street, Cañon City.
1894. Irvine, Joseph Clinton, Steele Block, Denver.
1892. Kehr, Samuel S., California Building, Denver.
1870. King, Edward H., 729 Sixteenth Street, Denver.
1897. King, Walter Joel, 2348 Champa Street, Denver.
1891. Kinley, Joseph B., 1406 Champa Street, Denver.
1894. Lawrence, George W., Colorado Springs.
1894. Morse, John Newton.
1898. Morton, Ed. Clarence, 2348 Champa Street, Denver.
1894. Mulford, Clarence H., Greeley.
1894. Nye, James D., 1443 Champa Street, Denver.
1894. Peck, Grant S., 708 Fourteenth Street, Denver.
1879. Shannon, Samuel F., 711 Seventeenth Street, Denver.
1898. Sheridan, W. Florence.
1894. Smythe, Samuel Scales, cor. California and 17th Streets, Denver.
1887. Spoor, David E., Grand Junction.
1897. Stewart, Ambrose Cecil, P. O. Box 640, Durango.
1880. Storke, Eugene F.
1889. Strickler, D. A., 705 Fourteenth Street, Denver.
1894. Tennant, Chauncey E., 2061 Curtis Street, Denver.
1888. Tucker, Genevieve, Pueblo.
1888. Walker, James M., 1257 Broadway, Denver.
1872. Walter, Ziba D., 107 W. 7th Street, Pueblo.
1898. Wheeler, Byron A., 1441 Stout Street, Denver.

Connecticut.

1881. Allen, Albion H., New London.
1888. Barber, Oscar M., Mystic Bridge.
1897. Barnes, Frank A., Summer Street, Stamford.
1881. Case, Erastus E., 109 Ann Street, Hartford.
1870. Cheney, Benjamin H., 45 Elm Street, New Haven.
1892. Colgrove, Charles H., Willimantic.
1897. Freeborn, Grant, Waterbury.
1891. Givens, Amos J., Stamford.
1874. Gregory, Edward P., Lafayette Street near State Street, Bridgeport.
1873. Hitchcock, Dexter, Norwalk.
1879. Hoag, Clitus S., 321 Lafayette Street, Bridgeport.
1885. Hooker, Edward Beecher, 253 Main Street, Hartford.
1888. Humphrey, Frank M., South Windham.
1887. Jewett, Joseph Waldo, New Haven.
1891. Keeler, Charles B., New Canaan.
1885. Linnell, E. H., 61 Broadway, Norwich.

1897. Massinger, Omray Lester, 293 State Street, Bridgeport.
1897. Newton, John Burwell, Unionsville.
1897. Nichols, G. Louis, Spring Street, Stafford Springs.
1886. Pardee, Emily V. D., South Norwalk.
1897. Peck, Frederic W., 42 Park Place, New Britain.
1877. Penfield, Sophia, Danbury.
1867. PHILLIPS, ALBERT WILLIAM, Birmingham.
1895. Pulver, Hudson Josiah, 203 Main Street, Torrington.
1881. Rockwell, John A., Norwich.
1849. RODMAN, WILLLIAM V., New Haven.
1880. Russegue, Henry E., 93 Farmington Avenue, Hartford.
1891. Sage, Frederick H., Middletown.
1892. Sage, Henry P., 48 Howe Street, New Haven.
1869. SAGE, WILLIAM H., New Haven.
1867. SANFORD, CHARLES E., Bridgeport.
1890. Sawtelle, Benjamin A., Norfolk.
1891. Stark, Clinton E., Norwich.
1892. Styles, Elmer S., New Britain.
1881. Vishno, Charles, 361 Orange Street, New Haven.
1895. Williams, Carl A., 8 Broad Street, New London.
1859. WILSON, GROVE H., Meriden.

Delaware.

1892. Flinn, Irvine M., 409 W. 8th Street, Wilmington.
1891. Flinn, Lewis W., 510 W. 9th Street, Wilmington.
1892. Hoey, William F., Frederica.
1869. KITTINGER, LEONARD, 724 King Street, Wilmington.
1886. Kittinger, Leonard Armour, 724 King Street, Wilmington.
1867. NEGENDANK, AUGUSTUS, 1112 Washington Street, Wilmington.
1891. Negendank, Egmont T., 1112 Washington Street, Wilmington.

District of Columbia.

1897. Ayler, Amos E., National Hom. Hospital, Washington.
1891. Babbitt, Zeno B., 810 Eleventh Street, N. W., Washington.
1871. Baldwin, Aaron, 1205 Eleventh Street, N. W., Washington.
1895. Branson, J. H., 1231 New Jersey Avenue, N. W., Washington.
1886. Burritt, Alice, 1129 Fourteenth Street, Washington .
1892. Cameron, Malcolm, 1027 Twenty-second Street, N. W., Washington.
1891. Choate, Rufus, 3267 O Street, Washington.
1889. Custis, George W. N., 112 E. Capitol Street, Washington.
1879. Custis, J. B. Gregg, 912 Fifteenth Street, N. W., Washington.
1892. Custis, Marvin A., 634 E. Capitol Street, Washington.
1890. Dennison, Ira Warren, 1326 L Street, N. W., Washington.
1886. Freer, James A., 1523 I Street, N. W., Washington.
1884. Gardner, Franklin A., 1018 Fourteenth Street, N. W., Washington.
1888. Gilbert, Charles B., 1403 H Street, N. W., Washington.
1898. Green, Julia M., 1738 N Street, N. W., Washington.
1894. Harrison, Julia C., " The Cairo," Washington.
1896. Hawxhurst, Howard H., 1333 L Street, N. W., Washington.

1891. Hislop, Margaret, 313 M. Street, N. W., Washington.
1891. Jenkins, Ralph, 1732 Massachusetts Avenue, N. W., Washington.
1888. King, William R., 1422 K Street, N. W., Washington.
1891. Kingsman, Richard, 701 E. Capitol Street, Washington.
1888. Krogstad, Henry, 915 Sixteenth Street, N. W., Washington.
1891. MacDonald, Thomas L., 1402 Massachusetts Avenue, N. W., Washington.
1885. Mellus, Edward Lyndon.
1892. Moffit, Melvin M., 127 B Street, S. E., Washington.
1896. O'Brien, Emilie Young, 2825 Fourteenth Street, N. W., Washington.
1895. Pearman, Sylvan, 633 E. Capitol Street, Washington.
1896. Rauterberg, Arthur C., 510 Fifth Street, N. W., Washington.
1887. Riggs, D. H., 1410 Eleventh Street, N. W., Washington.
1891. Roberts, Grace, 1109 K Street, N. W., Washington.
1897. Sommer, Henry Otto, 330 A Street, S. E., Washington.
1896. Stearns, John S., 1425 Rhode Island Avenue, N. W., Washington.
1891. Stearns, Solomon S., 1425 Rhode Island Avenue, N. W., Washington.
1896. Swartwout, F. A., 810 Eleventh Street, N. W., Washington.
1891. Swormstedt, Lyman B., 1455 Fourteenth Street, N. W., Washington.
1897. Taylor, Alfred H., 485 H Street, S. W., Washington.

Florida.

1888. Bruce, Orpha D. B., 1302 Florida Avenue, Tampa.
1892. Graham, Walter S., Miami.
1882. Stout, Henry R., Jacksonville.

Georgia.

1885. Hicks, Susan M., "The Grand," Atlanta.
1885. Lawshe, John Z., 116½ Peachtree Street, Atlanta.
1873. Lukens, M. B., 161½ Edgewood Avenue, Atlanta.
1872. Morse, Lucius D., P. O. Box 584, Atlanta.
1859. Orme, Francis H., 70 N. Forsyth Street, Atlanta.
1890. Paine, Clarence M., 67 N. Forsyth Street, Atlanta.

Germany.

1880. Pitcairn, Hugh, Hamburg.

Illinois.

1896. Adams, Charles, Central Music Hall, Chicago.
1872. Allen, Henry C., 5142 Washington Avenue, Chicago.
1890. Andrews, Sarah W., 319 Bowen Avenue, Chicago.
1890. Arnulphy, Bernard S., 5223 Jefferson Avenue, Hyde Park, Chicago.
1897. Arp, August H., Moline.
1889. Bailey, E. Stillman, 3034 Michigan Avenue, Chicago.
1881. Barker, Clarence F., Ellis Avenue and Oakwood Boulevard, Chicago.
1889. Bascom, Henry M., 727 Columbus Street, Ottawa.
1867. Bell, Jas. S., 2200 Congress Street, Chicago.
1892. Bergman, Nils, Dwight.
1893. Bernard, Charles C., 954 N. Halstead Street, Chicago.

1891. Blackman, Orville B., Dixon.
1893. Blackwood, Alexander L., 9151 Commercial Avenue, Chicago.
1894. Blouke, Milton Baker, 1222 W. Washington Street, Chicago.
1898. Bradford, Eli, 636 Eighteenth Street, Rock Island, Ill.
1897. Bragdon, Merritt Caldwell, A.M., 1709 Chicago Avenue, Evanston.
1873. Buffum, J. H., 34 Washington Street, Chicago.
1873. Canfield, Corresta T., 269 Lincoln Avenue, Chicago.
1871. Chase, Maurice J., Galesburg.
1890. Chislett, Howard Roy, 3030 Michigan Avenue, Chicago.
1896. Clapp, Katherine B., 6222 Woodlawn Avenue, Chicago.
1890. Cobb, Joseph P., 254 E. Forty-seventh Street, Chicago.
1894. Colwell, Charles Estabrook, 23 S. Lake Street, Aurora.
1892. Costain, Thomas E., Pratt Sanitarium, Chicago.
1890. Coutant, George F., La Salle.
1875. Cowperthwaite, Allen C., 717 Marshall Field Building, Chicago.
1883. Crawford, Alexander K., 100 State Street, Chicago.
1893. Crutcher, Howard, Columbus Memorial Building, Chicago.
1894. Davis, Franklin S., 201 Perry Avenue, Peoria.
1894. Davison, William M. W., 1333 W. Lake Street, Chicago.
1891. Day, Leonidas A. L., 103 State Street, Chicago.
1894. Delamater, Nicholas B., 31 Washington Street, Chicago.
1882. Downey, F. Edgar, Clinton.
1893. Downs, James N., 724 Columbus Street, Ottawa.
1866. Duncan, Thomas C., 100 State Street, Chicago.
1891. Dunn, Charles N., Broadway and Poplar Street, Centralia.
1895. Dunn, Helen S., Broadway and Poplar Street, Centralia.
1892. Ely, Charles F., 34 Washington Street, Chicago.
1893. Estabrooke, William Wilmot, Jerseyville.
1892. Estep, Charles S., Lexington.
1875. Everett, Ambrose S., 6158 Greenwood Avenue, Chicago.
1892. Everett, Frederick, 402 Centre Street, Chicago.
1890. Fellows, C. Gurnee, 70 State Street, Chicago.
1867. Fellows, H. Barton, 2969 Indiana Avenue, Chicago.
1873. Fisher, Charles E., 31 Washington Street, Chicago.
1898. Forbes, William O., 77 E. Thirty-ninth Street, Chicago.
1880. Foster, Richard N., 553 Jackson Boulevard, Chicago.
1889. Franklin, William A., Harvey.
1894. French, Malachi R., 44 E. Madison Street, Chicago.
1885. Fuller, Charles G., 38 Central Music Hall, Chicago.
1889. Gatchell, Charles, 162 Thirtieth Street, Chicago.
1896. George, Edgar J., 31 Washington Street, Chicago.
1898. Gordon, Arthur H., 268 La Salle Avenue, Chicago.
1890. Gould, William W., Rochelle.
1892. Graves, Kate I., 5663 Washington Avenue, Chicago.
1870. Grosvenor, Lemuel C., 185 Lincoln Avenue, Chicago.
1889. Grosvenor, Lorenzo N., 756 Kenmore Avenue, Chicago.
1895. Grosvenor, Wallace Fahnestock, 1125 Sheffield Avenue, Chicago.
1883. Gross, James Eldredge, 95 Wabash Avenue, Chicago.
1898. Gwynne, Evan E., 556 Garfield Avenue, Chicago.
1897. Hadley, May, 94 Lincoln Avenue, Chicago.
1887. Halbert, Homer V., 4630 Greenwood Avenue, Chicago.

1865. HALE, EDWIN M., 65 Twenty-Second Street, Chicago .
1898. Hall Amos C., 1273 E. Seventy-fifth Street, Chicago, Ill.
1898. Halphide, Aloin C., 3458 Wabash Avenue, Chicago.
1893. Halsted, Milton A., Jacksonville.
1892. Hattan, Albert H., Peru.
1879. Hawkes, William J., 100 State Street, Chicago.
1890. Hedges, Albert P., 754 E. Fullerton Avenue, Chicago.
1868. HEDGES, S. P., 890 Evanston Avenue, Chicago.
1895. Hendy, Clara A., Oak Park, Cook County.
1891. Hetherington, Judson Egbert, 1035 Warren Avenue, Chicago.
1898. Hill, Marion J., 507 Locust Avenue, Sterling.
1893. Honberger, Frank Henry, 3808 Indiana Avenue, Chicago.
1894. Hood, C. Todd, 31 Washington Street, Chicago.
1898. Hunt, George H., Paris.
1898. Jones, Mary H., Hyde Park, Chicago.
1896. Kahlke, Charles E., 3034 Michigan Avenue, Chicago.
1893. Karst, F. August, 636 Sedgwick Street, Chicago.
1896. Kerch, Harry E., Dundee.
1894. Kerr, Harlan T., 105 Perry Street, Peoria.
1870. KIPPAX, JOHN R., 3154 Indiana Avenue, Chicago.
1897. Lambden, Frank W., 95 E. Chicago Avenue, Chicago.
1882. Leavitt, Sheldon, 148 Thirty-seventh Street, Chicago.
1897. Leitch, Robert Newton, Lerna.
1893. Llewellyn, Henry S., N. E. cor Fifth and Harris Avenue, La Grange.
1893. Loelkes, George, 202 S. Jackson Street, Belleville.
1885. Lowenthal, Louis, 1405 W. 103d Street, Chicago.
1857. LUDLAM, REUBEN, 1823 Michigan Avenue, Chicago.
1887. Ludlam, Reuben, Jr., 2327 Michigan Avenue, Chicago.
1895. Maas, Elizabeth C., 129 N. Main Street, Rockford.
1893. MacCracken, Mary E. Avery, 4327 Greenwood Avenue, Chicago.
1890. MacCracken, William P., 4327 Greenwood Avenue, Chicago.
1895. McCullock, Carlton B., Cook County Hospital, Chicago.
1893. McGill, James Palmer, 4553 Forestville Avenue, Chicago.
1896. McIntyer, Edwin R., 386 N. Clark Street, Chicago.
1889. McKinney, Samuel P., 829 Warren Avenue, Chicago.
1898. Metcalf, Frank A., 47th Street and Kenwood Avenue, Chicago.
1896. Mitchell, Clifford, 70 State Street, Chicago.
1866. MITCHELL, J. S., 2954 Prairie Avenue, Chicago.
1893. Mordoff, Charles H., Genoa.
1898. Morse, Lucius B., Cook County Hospital, Chicago.
1890. Myers, Priscilla G., Aurora.
1893. Neiberger, William Emory, 402 W. Jefferson Street, Bloomington.
1890. Newell, R. C., 70 State Street, Chicago.
1895. Noyes, Henry A., Mount Carroll.
1893. Owen, Charles S., 123 Main Street, Wheaton.
1898. Owen, Milton G., Lincoln.
1891. Parker, James W., Warsaw.
1893. Pierson, Herman W., 6600 Gale Street, Chicago.
1890. Poppele, Charles F., Mt. Pulaski.
1874. Pratt, E. H., 100 State Street, Chicago.

1889. Primm, John W., Woodstock.
1893. Reininger, Edward E., 353 S. Oakley Street, Chicago.
1892. Rice, Marvin S., Aurora.
1893. Rich, Frederick W., Riverside.
1886. Richard, George E., 44½ Bellevue Place, Chicago.
1890. Roberts, Susan A., Downer's Grove.
1889. Roberts, Thomas Elmer, 144 S. Oak Park Avenue, Chicago.
1890. Rockwell, Cortlandt B., 5401 Madison Avenue, Chicago.
1891. Rogers, L. D., 441 Dearborn Avenue, Chicago.
1898. Sawyer, E. W., State and Washington Streets, Chicago.
1894. Schneider, S. Newton, 210 Dearborn Avenue, Chicago.
1882. Shears, George F., 3130 Indiana Avenue, Chicago.
1889. Shepard, William A., Elgin.
1889. Skiles, Hugh P., 963 W. Monroe Street, Chicago.
1893. Smith, Espy L., 974 W. Polk Street, Chicago.
1882. Smith, Julia Holmes, 100 State Street, Chicago.
1885. Smith, Norman Pitt, Paris.
1893. Smith, Orrin L., 47th Street and Greenwood Avenue, Chicago.
1889. Smith, Wilson A., 7022 Vernon Avenue, Chicago.
1897. Spencer, William Francis, Geneseo.
1895. Stafford, Walter W., 101 Twenty-fourth Street, Chicago.
1892. Stearns, William M., 34 Washington Street, Chicago.
1891. Stettler, Cornelia S., 181 Dearborn Avenue, Chicago.
1892. Straub, Effie Therese, 922 N. Clarke Street, Chicago.
1869. Streeter, John W., 2001 Prairie Avenue, Chicago.
1890. Sturtevant, Myron C., Morris.
1895. Swan, Charles J., 34 Washington Street, Chicago.
1898. Sweet, E. C., 70 State Street, Chicago.
1897. Swift, Arthur Wesley, 501 State Street, Belvidere.
1898. Taylor, Edwin A., 100 State Street, Chicago.
1887. Thome, Arthur G., 133 Lincoln Avenue, Chicago.
1890. Thompson, Jay J., 707 Marshal Field Building, Chicago.
1891. Thompson, Mark M., 805 W. Monroe Street, Chicago.
1879. Tooker, Robert N., 263 Dearborn Avenue, Chicago.
1890. Tremaine, Orlando G., 3977 Cottage Grove Avenue, Chicago.
1894. Turbin, Louis M., 103 State Street, Chicago.
1877. Vilas, C. H., Central Music Hall, Chicago.
1898. Waring, Guernsey P., 1106 Stewart Building, Chicago.
1893. Watry, Joseph, Central Music Hall, Chicago.
1891. Weirick, Clement A., 100 State Street, Chicago.
1889. Welker, J. Wesley, Englewood.
1897. Wessel, P. H., 517 Fifteenth Street, Moline.
1882. Whipple, Alfred A., 637 Main Street, Quincy.
1893. White, William Seymour, 70 State Street, Chicago.
1890. Whitman, Frank S., Belvidere.
1898. Whitmore, Frank B., 632 W. Congress Street, Chicago.
1885. Wilcox, Mrs. H. Tyler, Chicago.
1893. Willard, William G., 544 Washington Boulevard, Chicago.
1870. Woodbury, William H., 22 Central Music Hall, Chicago.
1870. Woodward, Alfred W., 130 Ashland Avenue, Chicago.

Indiana.

1895. Adams, H. Alden, 21 West Ohio Street, Indianapolis.
1869. Bowen, George W., 232 E. Washington Street, Fort Wayne.
1873. Breyfogle, W. L., New Albany.
1869. Compton, J. Augustine, Indianapolis.
1898. Coons, H. W., 96 E. Pearl Street, Lebanon.
1875. Davis, Fielding L., 209 Locust Street, Evansville.
1894. Erni, G. Oscar, 214 E. Spring Street, New Albany.
1873. Fisher, A. Leroy, 315 Pigeon Street, Elkhart.
1896. Fowler, Walter N., Bluffton.
1897. George, Wm. E., Market & Delaware Sts., Indianapolis.
1893. Gibbs, James C., Crown Point.
1897. Harrell, Samuel, 96 N. 10th Street, Noblesville.
1865. Haynes, J. R., 262 N. Illinois Street, Indianapolis.
1896. Hoag, James H., Oxford.
1896. Kreider, Martin K., Goshen.
1893. Martin, Francis V., Westville.
1895. Myers, Cornelius H., 305 Washington Street, South Bend.
1894. Rogers, Rebecca W., 19 Marion Block, Indianapolis.
1873. Runnels, O. S., 203 N. Meridian Street, Indianapolis.
1887. Runnels, Sollis, 38 E. Ohio Street, Indianapolis.
1892. Shoemaker, George L., Nappanee.
1891. Stewart, John W. G., Wabash.
1892. Stutz, J. A., Fort Wayne.
1882. Taylor, Theodore H., Evansville.
1873. Waters, Moses H., 126 N. 7th Street, Terre Haute.

Iowa.

1868. Bancroft, Walton, Keokuk.
1892. Barrett, James W., Osage.
1889. Becker, Frederick, Clermont.
1888. Becker, Frederick J., Postville.
1894. Blunt, Arthur W., 323 Fifth Avenue, Clinton.
1889. Bray, Nicholas, 1140 Main Street, Dubuque.
1892. Brooks, Caroline Frances, Independence.
1898. Brown, E. C., Second and State Streets, Madrid.
1889. Burns, Judson D., Grundy Centre.
1866. Cogswell, C. H., 65 Second Avenue, Cedar Rapids.
1898. Collester, Joseph C., 509 Main Street, Spencer.
1898. Cutter, Charles E., Magnolia.
1898. Dittmer, Earnest G., Manchester.
1895. Drake, Franklin Joseph, Webster City.
1895. Drake, Joseph H., 826 W. 4th Street, Des Moines.
1891. Eaton, Charles W., 420 Walnut Street, Des Moines.
1894. Gilchrist, James Grant, 215 College Street, Iowa City.
1889. Hanchett, Alfred P., Council Bluffs.
1891. Hanchett, John L., 601 Jackson Street, Sioux City.
1889. Harris, Nellie R., Des Moines.
1898. Hayden Arthur S., Wall Lake.

1884. Hazard, Theodore Lincoln, 12 N. Clinton Street, Iowa City.
1898. Hermann, John, 701 Jackson Street, Sioux City.
1876. Hindman, David R., Marion.
1897. Hoefle, Henry C., 314 Brady Street, Davenport.
1894. Hoyt, Lucius F., Jefferson.
1896. Hoyt, Mary O., 26 North 4th Street, Keokuk.
1898. Humphrey, Howard M., Lake City.
1876. Jackson, Edward R., Dubuque.
1894. King, Sylvester M., Albia.
1887. Linn, A. M., 605 Walnut Street, Des Moines.
1893. Linn, Ellis Gregg, Mount Pleasant.
1895. Martin, George Albert, Boone, Boone Co.
1898. Miller, Robt. P., Greenfield.
1897. Miner, Herbert Smith, 909 Central Avenue, Fort Dodge.
1898. Miner, James B., Osage.
1894. Montgomery, Phineas J., 217 Fourth Street, Council Bluffs.
1898. Moorhead, Jas., 743 Twelfth Street, Marion.
1898. Morse, Bertrand, Atlantic.
1893. Myers, Amos J., Creston.
1892. Newberry, Frank J., 12 N. Clinton Street, Iowa City.
1893. Patterson, H. S., Elkader.
1898. Paul, Irvin N., Perry.
1898. Plimpton, Wm. H., Glenwood.
1898. Prentis, Percy L., Delphos.
1898. Remington, Fred. A., Sioux City.
1895. Ross, Alice Idella, Whittier.
1891. Royal, George, 505 Walnut Street, Des Moines.
1898. Scott, Jas. R., Malvern.
1897. Small, Chas. Kendall, 319 North 4th Street, Burlington.
1890. Smith, Sarah, Council Bluffs.
1898. Snyder, Susan M., 121 S. Seventh Street, Council Bluffs.
1882. Spreng, T. F. H., Sioux City.
1891. Strawbridge, Frank A., Sigourney.
1896. Triem, Peter E., cor. Main and Madison Streets, Manchester.
1897. Wilder, Carlton V., 4 West 5th, Atlantic.
1898. Woodburn, Wm., 609 Walnut Street, Des Moines.
1898. Woodbury, Ernst I., 212 N. Fourth Street, Burlington.

Italy.

1858. Verdi, Tullio S., 11 Via delle Officine, Florence.

Kansas.

1893. Anderson, G. Hamlin, Seneca.
1868. Barrows, George S., Marion.
1893. Boardman, E. W., 115 Central Avenue, Parsons.
1877. Branstrup, William T., 222 W. 6th Street, Topeka.
1896. Cole, Sarah A., Lincoln.
1894. Dunlap, Frank, Osawatomie.
1894. Gardner, Henry Seth, Lawrence.
1898. Gillstrop, H. Preston, Washington.

1893. Holland, Joseph H., Argentine.
1896. Huss, John R., Eureka.
1876. Johnson, George H. T., Atchison.
1893. Light, Jacob Wilbert, Kingman.
1894. McIntosh, James W., Excelsior Springs.
1894. Menninger, Chas. Frederick, 727 Kansas Avenue, Topeka.
1893. Raines, Taylor E., 6th and Broadway, Concordia.
1897. Starry, Clark N., Louisburg.
1894. Stewart, Mary E., Topeka.
1893. Worthen, Lewis J., Paola.

Kentucky.

1895. Bryan, Joseph Temple, 120 W. Chestnut Street, Louisville.
1893. Clokey, Allison A., Second and Chestnut Streets, Louisville.
1895. Coon, George S., 617 Fourth Street, Louisville.
1887. Dills, Malcolm, Carlisle.
1893. Fischback, Frederick W., Newport.
1897. Holton, Charles Smoot, 316 Main Street, Richmond.
1893. Johns, Emory B., 24 E. 2d Street, Lexington.
1892. Kasselman, Harry C., Midway.
1898. Kehoe, Henry C., Flemingsburg.
1896. Mann, Jessie E., Fonda Block, Louisville.
1887. Millsop, Sarah J., Bowling Green.
1898. Peck, Fred. Ed., 114 Main Street, Cynthiana.
1896. Reid, Robert G., Fonda Block, Louisville.
1897. Reilly, William F., 1008 Madison Avenue, Covington.
1898. Thomasson, John C., 214 Main Street, Georgetown.
1895. Troutman, George D., 210 W. Chestnut Street, Louisville.
1897. Vansant, John Thomas, Paris.
1892. Washburne, Julia, 91 E. High Street, Lexington.
1898. Williams, Mary C., 2909 Portland Avenue, Louisville.

Louisiana.

1892. Aiken, John Gale, 1102 St. Charles Avenue, New Orleans.
1891. Mayer, Charles R., 1032 St. Charles Avenue, New Orleans.

Maine.

1869. Berry, Milton S., Bath.
1894. Cushman, Mary Floyd, Main Street, Castina.
1895. Emery, John Taylor Gilman, 27 Main Street, Waterborough.
1892. Fellows, William Edwin, 134 Hammond Street, Bangor.
1869. Flanders, David P., Belfast.
1869. Graves, S. P., Saco.
1897. Heath, Gertrude Emma, 164 Water Street, Gardiner.
1892. Hill, W. Scott, 154 State Street, Augusta.
1859. Jefferds, George P., Bangor.
1893. Johnson, Cora May, Skowhegan.
1888. Knox, Joseph H., 11 College Avenue, Waterville.
1895. Paul, C. Almon, Solon.
1886. Perkins, Wesley B., North High Street, Bridgeton.

1892. Prilay, John M., 83 Essex Street, Bangor.
1847. SHACKFORD, RUFUS, Portland.
1896. Stewart, Lincoln A., Brooksville.
1891. Thompson, W. S., 134 State Street, Augusta.
1876. Williams, Nancy T., Winthrop Court, Augusta.
1872. WORCESTER, SAMUEL, 31 Winter Street, Portland.

Maryland.

1892. Andrews, William R., Rockville.
1891. Barnard, James S., 2112 N. Charles Street, Baltimore.
1898. Boutin, Francis J., Independence.
1891. Brewster, Cora B., 1027 Madison Avenue, Baltimore.
1891. Brewster, Flora A., 1221 Madison Avenue, Baltimore.
1895. Burck, Lewis A., 17 E. 2d Street, Frederick.
1891. Chandlee, Henry, 704 W. North Avenue, Baltimore.
1883. Cole, Ezra Z., 1516 Mt. Royal Avenue, Baltimore.
1892. Dodd, Harry L., Chestertown.
1892. Evans, Henry J., Fayette and Carey Streets, Baltimore.
1852. HAMMOND, MILTON, 310 N. Paca Street, Baltimore.
1891. Janney, O. Edward, 837 N. Eutaw Street, Baltimore.
1892. Mark, Ella V., 717 Madison Avenue, Baltimore.
1884. Morgan, William L., 202 W. Franklin Street, Baltimore.
1897. Panebaker, William Milton, 1103 Linden Avenue, Baltimore.
1896. Parkhurst, Alice S., 1410 Park Avenue, Baltimore.
1891. Price, Eldridge C., 1012 Madison Avenue, Baltimore.
1867. PRICE, ELIAS C., 1012 Madison Avenue, Baltimore.
1890. Rumsey, Charles Leslie, 819 Park Avenue, Baltimore.
1892. Sharetts, Upton A., Frederick.
1867. SHEARER, THOMAS, 345 N. Charles Street, Baltimore.
1890. Shearer, Thomas L., 345 N. Charles Street, Baltimore.
1892. Stauffer, Alvin P., Hagerstown.
1891. Thomas, Charles H., 1312 N. Charles Street, Baltimore.
1883. Wanstall, Alfred, 921 Cathedral Street, Baltimore.
1892. Webner, Henry W., 723 W. Lombard Street, Baltimore.
1895. Wisner, Jacob Ward, 2111 St. Paul Street, Baltimore.
1891. Wright, George H., Forest Glen.

Massachusetts.

1894. Abbott, Charles Sewell, 130 Huntington Avenue, Boston.
1887. Adams, George Smith, Westboro.
1895. Allard, Frank Ellsworth, 39 Hancock Street, Boston.
1887. Allen, Lamson, Worcester.
1853. ANGELL, HENRY C., 16 Beacon Street, Boston.
1885. Babcock, D. A., Fall River.
1892. Babcock, Francis L., 15 Walnut Street, Dedham.
1892. Barstow, Benjamin P., Kingston.
1892. Barton, J. Marcus, Worcester.
1892. Batchelder, Frederick P., 232 Massachusetts Avenue, Boston.
1892. Batchelder, Henry F., 18 Locust Street, Danvers.
1868. BELL, JAMES B., 178 Commonwealth Street, Boston.

1877. Bellows, Howard P., cor. Boylston and Berkeley Streets, Boston.
1872. Bender, Prosper, Exeter Chambers, Boston.
1889. Bennett, William Henry, Fitchburg.
1888. Bennitt, Francis M., 120 Sumner Avenue, Springfield.
1892. Bingham, Russell, 62 Day Street, Fitchburg.
1887. Blodgett, S. H.
1897. Bond, Aaron John, 1 Center Street, Adams.
1869. Boothby, Alonzo, 1061 Beacon Street, Brookline.
1890. Bothfeld, James F., 455 Centre Street, Newton.
1895. Boyd, Herbert D., 370 Columbus Avenue, Boston.
1895. Bray, Amanda C., 4 Wellington Street, Worcester.
1893. Briggs, Joseph Emmons, 204 Huntington Avenue, Boston.
1896. Brown, Plumb, Jr., 503 State Street, Springfield.
1897. Brownell, De Ette, The Westborough Insane Hospital, Westboro.
1883. Burroughs, Amelia, 480 Boylston Street, Boston.
1892. Cahill, Eliza B., N. E. Conservatory of Music, Boston.
1895. Calderwood, Samuel Herbert, 2512 Washington Street, Boston.
1883. Carmichael, John H., 41 Maple Street, Springfield.
1882. Carvill, Alphonso H., Somerville.
1891. Chalmers, Robert, 47 Pleasant Street, Woburn.
1876. Chase, Herbert A., 950 Massachusetts Avenue, Cambridgeport.
1847. Chase, Hiram L., 924 Massachusetts Avenue, Cambridgeport.
1895. Chase, Joseph, Jr., East Weymouth.
1895. Childs, Helen S., 454 Centre Street, Jamaica Plain, Boston.
1891. Church, Adaline B., 102 Huntingdon Avenue, Boston.
1881. Clapp, J. Wilkinson, cor. St. Paul and Francis Streets, Brookline.
1888. Clarke, Henry L., Wellesley Hills.
1895. Clarke, Mortimer Hall, 221 Auburn Street, Auburndale.
1893. Cocke, James R., 24 Marlborough Street, Boston.
1895. Coffin, John Lambert, 229 Berkeley Street, Boston.
1886. Colby, Edwin A., Gardner.
1890. Colby, Edward Porter, 845 Boylston Street, Boston.
1895. Coleman, E. B., Centre Street, Nantucket.
1876. Conant, Thomas, Gloucester.
1896. Crisand, Carl, 2 Charlotte Street, Worcester.
1869. Cross, Hiram B., 21 Seavern's Avenue, Jamaica Plain, Boston.
1886. Culver, Jane Kendrick, 13 Arlington Street, Boston.
1881. Cummings, M. Louisa, 178a Tremont Street, Boston.
1867. Cushing, Alvin M., 175 State Street, Springfield.
1869. Cutler, William C., 10 Everett Avenue, Chelsea.
1895. Damon, Newcomb Lincoln, 405 Washington Street, Dorchester.
1892. Darby, Edward A., Northampton.
1892. Darby, Margaret G., Northampton.
1895. Dennett, George William, South Framingham.
1871. Drake, Olin M., 70 Huntington Avenue, Boston.
1891. Dwinell, Byron L., Taunton.
1897. Earl, George H., 18 Huntington Avenue, Boston.
1895. Eaton, Samuel Lewis, Newton Highlands.
1895. Edwards, Franklin W., 26 Hamilton Street, Southbridge.
1895. Emerson, Frederick Lincoln, 118 Hancock Street, Dorchester.
1891. Emerson, Nathaniel Waldo, 601 Boylston Street, Boston.

1895. Emery, Winfred Newell, 749 Main Street, Waltham.
1897. Ferguson, Arthur B., 45 Federal Street, Salem.
1896. Ferwald, Herbert E., Cohasset.
1879. Flanders, Martha J., Lynn.
1881. Flint, Almena J. Baker, 102 Huntington Avenue, Boston.
1895. Forbes, Charles Holt, 429 School Street, Athol.
1874. Forbes, George F., 42 William Street, Worcester.
1881. Foss, David, Newburyport.
1895. Fryer, Winsor F., 26 Oak Street, Middleboro.
1895. Fuller, Walter Tracy, 738 Dudley Street, Boston.
1895. Gardner, Frank Augustine, 23 North Street, Salem.
1895. Gary, Clara Emerette, 546 Columbus Avenue, Boston.
1895. Gleason, Charles Sherman, Wareham.
1887. Gooding, E. Jeanette, 223 W. Springfield Street, Boston.
1886. Halsey, Frederick W., 272 Newberry Street, Boston.
1869. HAYWARD, JOSEPH W., Taunton.
1895. Haywood, George William, 45 Hanover Street, Lynn.
1891. Hill, Lucy Chaloner, 492 N. Main Street, Fall River.
1895. Hill, Noble Hind, 35 Huntington Avenue, Boston.
1895. Hodgdon, Frank A., 45 Pleasant Street, Malden.
1869. HOLT, EDWARD B., Lowell.
1896. Hopkins, William T., 65 Broad Street, Lynn.
1859. HOUGHTON, HENRY A., 136 Marlborough Street, Boston.
1888. Houghton, Neidhard H., 845 Boylston Street, Boston.
1892. Hunt, Charles R., 262 Union Street, New Bedford.
1884. Hunter, Horatio M., Lowell.
1878. Jackson, William L., 86 Dudley Street, Roxbury, Boston.
1893. Johnson, Frederick Charles, 26 Market Street, Newburyport.
1895. Johnson, Sara, "The Cluny," Copley Square, Boston.
1897. Keith, Ellen L., Winter Street, Framingham.
1895. Klopp, Henry Irwin, Westboro.
1897. Krauss, James, 377 Boylston Street, Boston.
1865. KREBS, FRANCIS H., 42 Union Park, Boston.
1898. Larkeque, Garrett B. B., 345 Main Street, Athol.
1895. Latham, Carrie Augusta, 38 Central Street, Leominster.
1891. Leland, Clarence H., 128 Merrimac Street, Lowell.
1895. Mack, Helen Georgiana Flagler, 92 White Street, Boston.
1895. Mann, Martha Elizabeth, 2 Commonwealth Avenue, Boston.
1895. Marsh, Franklin F., 106 Tremont Street, Boston.
1891. Martin, G. Forrest, 17 Kirk Street, Lowell.
1895. May, George Elisha, Institution Ave. and Beacon St., Newton Centre.
1895. Miller, Edward Roscoe, 15 Merriam Street, Leominster.
1895. Miller, Lizbeth Dora, 12 Cordis Street, Boston.
1895. Monroe, John Eugene, Orange.
1892. Moore, J. Herbert, Brookline.
1895. Morse, Charles W., 101 Essex Street, Salem.
1869. MORSE, MARTIN V. B., Marblehead.
1867. MORSE, NATHAN R., Salem.
1891. Mosher, Mary E., 53 Blue Hill Avenue, Roxbury.
1892. Murdock, Edward A., 22 Pleasant Street, Spencer.
1895. Newton, Frank Loomis, 147 Highland Avenue, Somerville.

1880. Nichols, Charles L., Worcester.
1881. Packard, Horace, 362 Commonwealth Avenue, Boston.
1886. Packer, Henry E., 11 Pleasant Street, Woburn.
1850. PAINE, HORACE M., West Newton.
1853. PAINE, JOSEPH P., Hotel Eliot, Roxbury.
1877. Paine, N. Emmons, West Newton.
1891. Palmer, Anna Chipman, P. O. Box 19, Mallapan.
1867. PAYNE, FREDERICK W., 162 Boylston Street, Boston.
1860. PAYNE, JAMES H., 344 Commonwealth Avenue, Boston.
1893. Payne, John Howard, Pierce Building, Copley Square, Boston.
1892. Pearson, Mary M., 361 Massachusetts Avenue, Boston.
1895. Pease, Ella Gertrude, 214 Commonwealth Avenue, Boston.
1887. Percy, Frederick B., Brookline.
1887. Percy, George Emory, Salem.
1895. Perkins, Archie Elmer, South Ashburnham.
1895. Perkins, Charles Edwin, Warren.
1894. Powers, A. Howard, 352 Massachusetts Avenue, Boston.
1885. Rand, John Prentice, 74 Main Street, Monson.
1891. Reed, Clara D. W., 140 W. Church Street, Newton.
1895. Rice, George Brackett, 229 Berkeley Street, Boston.
1895. Richardson, Edward Blake, Chelsea and Corey Streets, Everett.
1886. Richardson, Frank C., 601 Boylston Street, East Boston.
1886. Rollins, Charlotte A., Chelsea.
1896. Sanborn, Emma M. E., 4 Morton Street, Andover.
1890. Sanders, Orren B., 358 Commonwealth Avenue, Boston.
1859. SANDERS, ORREN S., 511 Columbus Avenue, Boston.
1867. SCALES, EDWARD P., Newton.
1872. SCOTT, CHESTER W., Lawrence.
1895. Scott, Cyrus W., 90 Main Street, Andover.
1897. Seip, Charles Lewis, 299 Union Street, New Bedford.
1895. Shapleigh, Alfred L., 38 Pleasant Avenue, Worcester.
1894. Shaw, John Cook, 23 S. 6th Street, New Bedford.
1895. Shaw, John Joseph, 14 Brewster Street, Plymouth.
1859. SHERMAN, JOHN H., 534 Broadway, Boston.
1879. Sherman, Sarah E., 11 Barton Square, Salem.
1854. SISSON, EDWARD R., New Bedford.
1896. Slocomb, George A., 804 Main Street, Worcester.
1869. SMITH, J. HEBER, 279 Dartmouth Street, Boston.
1894. Smith, Winfield Scott, 601 Boylston Street, Boston.
1888. Southwick, George R., 31 Massachusetts Avenue, Boston.
1869. SPALDING, HENRY E., "The Cluny," Boston.
1892. Spalding, Samuel H., Hingham.
1895. Spencer, George Frederick Allen, 40 Church Street, Ware.
1898. Stephenson, Benj. S., 49 Kirk Street, Lowell.
1895. Stiles, Charles Wallace, 17 Rawena Street, Ashmeat.
1880. Strong, Thomas M., 176 Huntington Avenue, Boston.
1891. Suffa, George A., 229 Berkeley Street, Boston.
1887. Sutherland, John Preston, 295 Commonwealth Avenue, Boston.
1880. Swain, Mary L., 2 Commonwealth Avenue, Boston.
1895. Sylvester, Stephen Alden, Beacon Street, Newton Center.
1888. Talbot, George H., Newtonville.

1853. TALBOT, I. TISDALE, 687 Boylston Street, Boston.
1890. Talbot, Winthrop Tisdale, 687 Boylston Street, Boston.
1875. Taylor, Esther W., 226 Ferry Street, Malden.
1890. Thomas, Charles H., 427 Broadway, Cambridge.
1887. Tobey, Walter Henry, 173 Newbury Street, Boston.
1885. Tompkins, Albert H., 20 Seavern's Avenue, Jamaica Plain, Boston.
1892. Turner, Maurice W., 127 Harvard Street, Brookline.
1895. Van der Burgh, David W., 320 Rock Street, Fall River.
1895. Walker, Frank Clifford, 108 High Street, Taunton.
1869. WARE, WILLIAM G., Dedham.
1872. WARREN, JOHN K., 68 Pleasant Street, Worcester.
1859. WESSELHOEFT, CONRAD, 291 Boylston Street, Boston.
1867. WESSELHOEFT, WALTER, 391 Harvard Street, Cambridge.
1894. Wesselhoeft, Wm. Fessenden, 851 Boylston Street, Boston.
1859. WESSELHOEFT, WILLIAM P., 176 Commonwealth Avenue, Boston
1888. Whiting, Walter B., Malden.
1886. Wilkins, George H., Palmer.
1894. Winn, William John, 6 Ash Street, Cambridge.
1895. Wood, Nelson Mervin, 71 Elm Street, Charleston.
1888. Worcester, George W., Newburyport.
1895. Worcester, John Fonerden, 90 Church Street, Clinton.

Michigan.

1873. Allen, George D., Portland.
1892. Allen, Sara J., Charlotte.
1894. Avery, Aaron B., Pontiac.
1896. Ayres, James N., 534 S. Burdick Street, Kalamazoo.
1896. Babington, John, Corunna.
1893. Bailey, William M., 29 Miami Avenue, Detroit.
1892. Balyeat, Edmund A., 122 W. Main Street, Kalamazoo.
1896. Bartholomew, Daniel D., Holly.
1896. Barton, William R., 216 Washington Street, Ypsilanti.
1896. Bowen, Emma K., 156 St. Auburn Avenue, Detroit.
1893. Brigham, Homer C., 27 Morris Avenue, Grand Rapids.
1896. Caron, George G., 30 Henry Street, Detroit.
1891. Clark, Ernest A., Ann Arbor.
1893. Clark, Whitman E., Three Rivers.
1892. Copeland, Roy S., 46 Catherine Street, Ann Arbor.
1888. Cornell, Albert B., Kalamazoo.
1892. Cowell, Joseph H., 301 S. Warren Avenue, Saginaw.
1896. Crum, J. D., 314 N. Ball Street, Owosso.
1894. Crumrine, Charles G., 1444-1445 Majestic Building, Detroit.
1888. Defendorf, John J., Ionia.
1889. Dewey, Willis A., Ann Arbor.
1896. Frost, William A., Tecumseh.
1896. Garwood, Vashti D., 40 Twelfth Street, Ann Arbor.
1896. Hendershott, Lizzie A., Irving.
1896. Hinsdale, Wilbert B., Ann Arbor.
1896. Hoag, Frank L., 373 S. College Avenue, Grand Rapids.
1896. Hyde, Rufus J., Eaton Rapids.
1896. Jenkins, Charlie G., Mason.

1875. Jones, Leonidas M., Brooklyn.
1880. Kinyon, Claudius B., Ann Arbor.
1896. Klein, Emma, 156 St. Aubin Avenue, Detroit.
1887. Knight, Stephen H., 18 W. Willis Avenue, Detroit.
1896. Lards, Charles H., 33 Butler Street, Adrian.
1896. Lenfestey, John A., 27 N. Gratiot Street, Mt. Clemens.
1888. Leseure, Oscar, 406 Cass Avenue, Detroit.
1886. MacLachlan, Daniel A., 1301 Majestic Building, Detroit.
1896. McCausland, H. G., 25 High Street, W. Detroit.
1896. McLaren, William R., 25 Washington Avenue, Detroit.
1875. Miller, Christopher C., 31 Winder Street, Detroit.
1896. Mills, Wesley J., Howell.
1890. Mowry, Henry P., Bronson.
1893. Norris, Maria Whittelsey, Widdicomb Building, Grand Rapids.
1889. Nottingham, David M., Lansing.
1888. Nottingham, John C., Bay City.
1882. Obetz, Henry L., 139 First Street, Detroit.
1884. Olin, Rollin C., 110 Henry Street, W. Detroit.
1893. Orleman, E. Louise, 32 Bagg Street, Detroit.
1896. Pullen, Charles D., Mount Pleasant.
1896. Richards, R. Milton, 25 Washington Avenue, Detroit.
1897. Robertson, Herbert Miller, 64 Myrtle Street, Detroit.
1896. Sage, Norman L., 680 Twenty-fourth Street, Detroit.
1895. Saxton, Arthur W., Jackson.
1897. Sears, M. Maywood, 95 S. Main Street, Ann Arbor.
1889. Sherman, Nancy B., Kalamazoo.
1896. Sinclair, Malcolm C., 124 Sheldon Street, Grand Rapids.
1873. Smith, Chester, Portland.
1896. Smith, Cyrenius C., Bedford.
1896. Smith, Dean T., 302 N. Elm Avenue, Jackson.
1875. Spinney, Andrew B., Reed City.
1892. Spranger, M. J., Detroit.
1896. Sterling, Charles F., 396 Jefferson Avenue, Detroit.
1896. Stevens, Mary T., 6 Adams Avenue, W. Detroit.
1896. Stevens, Rollin H., 6 Adams Avenue, W. Detroit.
1896. Stewart, Francis E., 106 Charlotte Street, Detroit.
1896. Tuthill, Frank S., Concord.
1891. Ullery, Arthur O., Niles.
1876. Van Vleck Peter H., Sturgis.
1896. Willard, Mary A., 142 West High Street, Detroit.

Minnesota.

1888. Aldrich, Henry C., 313 Medical Block, Minneapolis.
1889. Bowman, Frederick C., 203 Second Avenue, W. Duluth.
1889. Briggs, Warren S., St. Paul.
1896. Clark, George E., 203 S. Main Street, Stillwater.
1898. Cobb, Sheridan G., 1852 Marshall Avenue, St. Paul.
1893. Crawford, Joanna D., 3016 Bloomington Avenue, Minneapolis.
1898. Dennie, C. E., 2315 Portland Avenue, Minneapolis.
1893. Eaton, Cora E. Smith, 608 Nicollet Avenue, Minneapolis.

1893. Fisher, Anna M., Le Seur.
1889. Hall, Levi, 77 Highland Avenue, Minneapolis.
1897. Hamlin, George Baldwin, Granada.
1889. Harnden, George B., Sherburne.
1871. HIGBEE, ALBERT E., Masonic Temple, Minneapolis.
1871. HIGBEE, CHESTER G., 2912 Stevens Avenue, Minneapolis.
1888. Horning, David W., 604 Dayton Building, Minneapolis.
1869. HUMPHREY, OTIS M., 100 E. 14th Street, Minneapolis.
1889. Just, August Adolph, Crookston.
1896. Koch, Margaret, 628 Fourth Street, S. E., Minneapolis.
1896. Leavitt, Henry H., 909 Fourth Street, S. E., Minneapolis.
1882. Leonard, William E., 608 Nicollet Avenue, Minneapolis.
1890. Lowe, Thomas, Slayton.
1898. Mann, E. L., 681 Endicott Street, St. Paul.
1898. Ogden, Benj. H., German Bank Building, St. Paul.
1889. Pillsbury, Charles B., Palladio Building, Duluth.
1895. Rasmussen, Robert Ralph, Minneapolis.
1883. Renninger, John S., Marshall.
1893. Richardson, Oscar K., 303 Masonic Temple, Minneapolis.
1889. Ripley, Martha G., 24 Tenth Street, South, Minneapolis.
1881. Roberts, George F., 604 Dayton Building, Minneapolis.
1889. Stephens, Aaron M., 431 Fourth Street, Red Wing.
1889. Wagner, Charles Henry, Faribault.
1888. Welch, George Oakes, Fergus Falls.
1881. Wilberton, Lawrence G., Winona.
1889. Wilcox, Catharine, Endicott Arcade, St. Paul.
1876. Williamson, Alonzo P., 502 Nicollet Avenue, Minneapolis.

Missouri.

1897. Bishop, Frank A., 509 Broadway, Hannibal.
1896. Blanke, Theodore F., 3333 S. Jefferson Avenue, St. Louis.
1876. Campbell, James A., 1729 Washington Avenue, St. Louis.
1898. Cannon, J. M. W., Kidder.
1866. COMSTOCK, T. G., 3401 Washington Avenue, St. Louis.
1893. Coombs James T., Fulton.
1898. Cramer, William E., 1103 Main Street, Kansas City.
1893. Dean, George A., 1103 Main Street, Kansas City.
1892. Delap, Silas C., 1214 Main Street, Kansas City.
1893. Edgerton, Mark, 1106 Main Street, Kansas City.
1894. Elliott, Charles S., 1103 Main Street, Kansas City.
1896. Elliott, Frank, 1008 Main Street, Kansas City.
1898. Flower, Frank W., Carthage.
1897. Forster, William A., 328 Rialto Building, Kansas City.
1867. FOSTER, WILLIAM D., 420 W. 11th Street, Kansas City.
1891. Galloway, William L., 1232 Taylor Avenue, St. Louis.
1897. Gibson, David M., 412 S. Jefferson Avenue, St. Louis.
1894. Goodman, Charles H., 3329 Washington Avenue, St. Louis.
1870. GORDON, GEORGE A., Chillicothe.
1893. Grundmann, J. William, 1000 W. Jefferson Avenue, St. Louis.

1893. Gundelach, Charles H., 3900 Westminster Place, St. Louis.
1898. Gundelach, W. H., 3821 Finney Avenue, St. Louis.
1890. Gutherz, Lizzie Gray, 3689 Olive Street, St. Louis.
1885. Hall, William G., 822 Jule Street, St. Joseph.
1882. Harris, W. John, 3514 Lucas Avenue, St. Louis.
1894. Henry, Samuel Dwyer, Excelsior Springs.
1894. Hudson, Thomas Howard, Kansas City.
1873. Jenney, William H., Broadway and 12th Street, Kansas City.
1878. Kershaw, J. Martine, 3421 Washington Avenue, St. Louis.
1897. Luyties, Carl J., 2816 Lafayette Avenue, St. Louis.
1894. McElwee, L. Claude, 215 S. Jefferson Avenue, St. Louis.
1894. Mellies, Charles, 3825 N. 20th Street, St. Louis.
1890. Morgan, Willis B., 4200 N. Grande Avenue, St. Louis.
1890. Neumeister, Anton E., 1214 Main Street, Kansas City.
1894. Northrup, Emerson S., 414 Garfield Avenue, Kansas City.
1893. Ray, William L., 1214 Main Street, Kansas City.
1898. Reid, John M., Main Street, Centerview.
1897. Reily, Walter E., Bowling Green.
1876. Richardson, William C., 5359 Cabanne Avenue, St. Louis.
1875. Runnels, Moses T., 912 Walnut Street, Kansas City.
1898. Schorr, Edw., Garden City.
1889. Thatcher, John Thomas, Oregon.
1897. Van Scoyoc, Lloyd G., 1103 Main Street, Kansas City.
1889. Westover, H. W., 7th and Edward Streets, St. Joseph.
1898. Wherry, Curtis A., Marshall.
1896. Wise, Julius C., 14 W. 12th Street, Kansas City.

Montana.

1897. Cowperthwaite, Joseph Erving, 9, 10, 11 Owsley Block, Butte.
1888. Thompson, Charles S. W., Helena.

Nebraska.

1894. Alexander, Ernest L., 1204 N. 24th Street, Omaha.
1898. Ashley, Sherman, Fairmount.
1888. Bailey, Benjamin F., Lincoln.
1898. Billings, Robert Anderson, Ord.
1898. Campbell, Sam. M., 1326 S. Thirty-second Street, Omaha.
1898. Carr, E. A., 1205 O Street, Lincoln.
1898. Cate, Wm. A., Union Building, Nelson.
1898. Chandler, Chas. D., 710 D Street, Lincoln.
1894. Clarke, Harvey L., Fairbury.
1898. Connell Ralph W., 1707 Dodge Street, Omaha.
1898. Dorris, Alva H., 141 S. Twelfth Street, Lincoln.
1888. Finney, Everett B., 1329 N Street, Lincoln.
1896. Foote, Dellizon A., 200 Paxton Block, Omaha.
1897. Foss, John B., Crete.
1889. Hanchett, William Henry, 323 S. 13th Street, Omaha.
1898. Hancock, Avery C., Hartington.
1886. Hoffman, Jacob Oliver, Orleans.

1897. Holden, Horace Thomas, 2536 Dodge Street, Omaha.
1894. Humphrey, William Armine, Plattsmouth.
1898. Leake, Endell N., 237 W. Sixth Street, Tremont.
1898. Merryman, Thos. T., 533 N. 27th Street, Lincoln.
1894. Miessler, C. F. Otto, Columbus, Platt County.
1894. Neal, George H., Falls City.
1893. Perky, Lenore, 148 S. 12th Street, Lincoln.
1898. Quimby, Stillman J., 318 S. 26th Street, Omaha.
1898. Shoemaker, Chas. A., 503 South Eleventh Street, Lincoln.
1893. Sprague, Charles G., Beatrice, Omaha.
1895. Verges, W. F., 901 Prospect Avenue, Norfolk.
1860. Wood, Orlando S., 521 N. Y. L. Bldg., Omaha.
1897. Worley, Howard A., Continental Block, Omaha.

Nevada.

1893. Wagner, Philippina, Carson City.

New Hampshire.

1895. Dodge, Charles E., 913 Elm Street, Manchester.
1892. Gould, Herbert D., New Boston.
1891. Grant, William H., Ossipee Centre.
1867. Hinds, W. H. W., Milford.
1895. Parker, Edwin K., Littleton.
1893. Roby, George F., 7 South Spring Street, Concord.
1886. Rounsevel, C. Sedgwick, 211 Main Street, Nashua.
1891. Smith, George R., Dover.
1895. Tuttle, Walter, Court Street, Exeter.
1891. Wiley, Rebecca W., 160 Main Street, Laconia.
1895. Worcester, Frank D., Keene.
1881. Wrisley, John A., Lakeport.

New Jersey.

1896. Ackerman, James F., 905 Grand Avenue, Asbury Park.
1891. Applegate, G. T., 25 Livingston Avenue, New Brunswick.
1891. Artz, Jerome L., Cramer Hill.
1887. Bailey, Alfred W., 1809 Pacific Avenue, Atlantic City.
1857. Beckwith, Seth R., East Orange.
1890. Best, George B., Englewood.
1860. Bradford, F. Standish, 36 Maple Avenue, Morristown.
1891. Branin, John W., Mount Holly.
1898. Brown, Stanley R., 287 N. Broad Street, Elizabeth, N. J.
1893. Bruce, Ida F., Irvington.
1894. Bryan, Joseph Harter, 221 Asbury Avenue, Asbury Park.
1891. Burling, J., Summit.
1875. Butler, Clarence W., 35 Fullerton Avenue S., Montclair.
1891. Carr, Ada, 125 Vreeland Avenue, Paterson.
1871. Church, Charles A., 128 Prospect Street, Passaic.
1895. Connett, George Cramer, 45 Washington Street, Morristown.
1897. Cooley, Justus H., 122 Westervelt Avenue, Plainfield.

1885. Crosby, George W., 716 Atlantic Avenue, Atlantic City.
1893. DeBaun, Edwin, 142 Main Avenue, Passaic.
1869. DENNIS, LABAN, 30 Central Avenue, Newark.
1891. Fleming, John R., 1903 Pacific Avenue, Atlantic City.
1866. GARSIDE, WILLIAM B., East Orange.
1895. Geddes, Annie Lowe, 69 Fullerton Avenue, Montclair.
1881. Griffith, Anna E., 501 N. 4th Street, Camden.
1891. Hall, Harrison B., Riverton.
1892. Harman, George W., 900 Broad Street, Newark.
1888. Heberton, William W., South Orange.
1896. Holmes, Frances W., Bellevue Avenue, Upper Montclair.
1883. Howard, Erving Melville, 401 Linden Street, Camden.
1892. Kinne, Porter S., Paterson.
1869. KINNE, THEODORE Y., Paterson.
1890. Lefferts, Franklin P., Belvidere.
1881. McClellan, David, 104 Clinton Avenue, West Hoboken.
1869. MCGEORGE, WALLACE, 521 Broadway, Camden.
1891. McKinstry, Frank P., Washington.
1892. Mattson, Alfred S., Moorestown.
1869. MIDDLETON, M. F., 423 Market Street, Camden.
1881. Moffat, Edgar V., 476 Main Street, Orange.
1867. Morgan, John C., Millville.
1891. Munson, Milton L., 1503 Pacific Avenue, Atlantic City.
1891. Myers, Samuel I., Avenue C and W. 33d Street, Bayonne.
1893. Nivison, Anna T., 567 Orange Street, Newark.
1872. OCKFORD, GEORGE M., 3 Oak Street, Ridgewood.
1895. Opdyke, Levings A., 55 Clinton Avenue, Jersey City.
1891. Parker, T. Ellwood, Woodbury.
1891. Richards, George Herbert, Orange.
1880. Rushmore, Edward, Plainfield.
1871. SHIVERS, BOWMAN H., Haddonfield.
1891. Shreve, Joseph, Burlington.
1891. Sleght, B. H. B., 31 Lincoln Park, Newark.
1891. Sooy, Walter C., 1913 Pacific Avenue, Atlantic City.
1871. STREETS, JACOB G., Bridgeton.
1881. Uebelacker, Arman E., 109 South Street, Morristown.
1892. Upham, Ella Prentiss, Asbury Park.
1896. Ward, William R., Lyons Farms.
1891. Williams, Franklin E., Haddonfield.
1891. Woodward, George D., 211 Broadway, Camden.
1886. Youngman, Maurice D., 1618 Pacific Avenue, Atlantic City

New York.

1895. Adams, G. Francis, Gowanda.
1876. Adams, Reuben A., 46 N. Fitzhugh Street, Rochester.
1897. Albertson, Charles S., 358 Richmond Avenue, Buffalo.
1897. Allen, George, Gowanda.
1891. Allen, Paul, 3 E. 48th Street, New York.
1866. ALLEN, TIMOTHY FIELD, 3 E. 48th Street, New York.
1869. ARCULARIUS, PHILIP E., 104 W. 44th Street, New York.

1891. Arschagouni, John, 743 Lexington Avenue, New York.
1897. Arthur, Daniel H., Gowanda.
1894. Ayres, Emma F. Macomber, 69 Caroline Street, Saratoga.
1897. Babcock, Archibald H., Randolph.
1874. Baethig, Henry, 350 Pennsylvania Street, Buffalo.
1894. Baker, Jennie Van Holland, 512 Bedford Avenue, Brooklyn.
1857. BALDWIN, JARED G., 8 E. 41st Street, New York.
1880. Bassett, John S., 11 W. 31st Street, New York.
1867. BAYLIES, B. L. B., 418 Putnam Avenue, Brooklyn.
1896. Beaman, Charles P., Ithaca.
1877. Beebe, Clarence E., 62 W. 37th Street, New York.
1892. Belden, Charles K., 28 Clinton Avenue, Jamaica.
1881. Bennett, James A., 4 Irving Place, New York.
1872. BERGHAUS, ALEXANDER, 138 E. 65th Street, New York.
1897. Besemer, Howard Burhause, Osborn Block, Ithaca.
1893. Besemer, Martin, 6 W. State Street, Ithaca.
1874. Biegler, Joseph A., 58 S. Clinton Street, Rochester.
1895. Birch, Charles E., White Plains.
1881. Birdsall, Stephen T., Glens Falls.
1895. Birdsall, Thomas P., Patterson.
1891. Bishop, William H., 46 W. 48th Street, New York.
1853. BISSEL, ARTHUR F., 157 Maiden Lane, New York.
1893. Bissell, Elmer Jefferson, 75 S. Fitzhugh Street, Rochester.
1869. BLOSS, J. P., 45 Second Street, Troy.
1897. Bodenbender, Edward G., 660 Walden Avenue, Buffalo.
1874. Bond, Mary E., 122 Lexington Avenue, New York.
1891. Boocock, Robert, 965 Flatbush Avenue, Brooklyn.
1874. Boynton, Frank H., 36 W. 50th Street, New York.
1867. BROWN, EDWARD V., North Tarrytown.
1891. Brown, M. Belle, 135 W. 34th Street, New York.
1894. Bryant, William Cullen, 64 Greene Avenue, Brooklyn.
1873. BUTLER, WILLIAM M., 507 Clinton Avenue, Brooklyn.
1898. Button, Lucius L., 45 S. Clinton Street, Rochester.
1886. Candee, J. Willis, 402 Warren Street, Syracuse.
1896. Carleton, Bukk G., 75 W. 50th Street, New York.
1897. Chaduick, John Gartside, 90 Cottage Street, Buffalo.
1891. Chapin, Edward, 21 Schermerhorn Street, Brooklyn.
1896. Church, Eloise I., 41 W. 94th Street, New York.
1897. Church, Herbert A., 601 Warren Street, Syracuse.
1886. Clark, Byron G., 162 W. 122d Street, New York.
1887. Clark, Lyman A., Cambridge.
1869. COBURN, EDWARD S., 91 Fourth Street, Troy.
1883. Cole, Directus De Forest, Batavia.
1896. Collins, Newton M., 43 East Avenue, Rochester.
1894. Conklin, Frances C. Donovan, New Brighton.
1881. Cook, Joseph T., 636 Delaware Avenue, Buffalo.
1894. Cort, Lottie A., 89 Division Avenue, Brooklyn.
1877. Couch, Asa S., Fredonia.
1876. Couch, Lewis B., Nyack.
1894. Cox, Edward Gilbert, 109 State Street, Albany.
1894. Cox, Frederick Joseph, 109 State Street, Albany.

1895. Cox, George A., 80 S. Swan Street, Albany.
1895. Crump, Walter Gray, 693 Madison Avenue, New York.
1887. Dake, Addie B. Crowley, 117 E. Jefferson Street, Syracuse.
1879. Danforth, L. L., 35 W. 51st Street, New York.
1878. Davis, John E. L., 743 Madison Avenue, New York.
1887. Deady, Charles, 110 W. 48th Street, New York.
1897. Dean, Louis W., Waterville.
1891. Dearborn, Henry M., 146 W. 57th Street, New York.
1897. Decker, William More, 416 Norwood Avenue, Buffalo.
1897. Delabarre, Walter E., 222 W. 59th Street, New York.
1897. Delavan, Elizabeth Hinchley, Round Lake.
1881. Demarest, John H., 59 W. 126th Street, New York.
1875. Deschere, Martin, 334 W. 58th Street, New York.
1893. Dillingham, Thomas Manley, 8 W. 49th Street, New York.
1883. Dillow, George Morris, "The Rutland," 57th St. and B'way, New York.
1872. DOUGHTY, FRANCIS E., 512 Madison Avenue, New York.
1895. Dowe, Frank LeC., S. Boulevard and Briggs Avenue, New York.
1887. Dowling, John W., 8 W. 45th Street, New York.
1897. Dowling, Joseph Ivimey, 201 E. 23d Street, New York.
1897. DuBois, Willard C., 357 S. Warren Street, Syracuse.
1895. Dunlevy, Rita, 328 W. 57th Street, New York.
1897. Eddy, Ermina Catharine, 500 William Street, Elmira.
1869. ELLIOTT, JOSEPH B., 493 Clinton Avenue, Brooklyn.
1897. Erb, Peter, 535 Ashland Avenue, Buffalo.
1867. ERMENTRAUT, JOHN P., 261 E. 4th Street, New York.
1874. Evans, Albert J., Fredonia.
1887. Faust, Louis, Schenectady.
1894. Fay, Russell P., 165 Warburton Street, Yonkers.
1868. FINCH, EDWIN W., Center Ave. and Prospect St., New Rochelle.
1855. FINCKE, BERNHARDT, 122 Livingston Street, Brooklyn.
1897. Fisher, Edward A., 1038 Fillmore Avenue, Buffalo.
1895. Fiske, Edwin Rodney, 484 Bedford Avenue, Brooklyn.
1867. FISKE, WILLIAM M. L., 484 Bedford Avenue, Brooklyn.
1897. Frazee, Charles Edward, 1662 Broadway, Buffalo.
1897. Frazer, Francis Macdonald, 41 W. 45th Street, New York.
1897. Gardner, Louis Bradstreet, 405 Prospect Avenue, Buffalo.
1892. Garrison, John B., 111 E. 70th Street, New York.
1869. GIFFORD, GILBERT L., Hamilton.
1879. Gifford, Willis B., Attica.
1883. Gorham, George E., 160 Hamilton Street, Albany.
1871. GREENLEAF, JOHN T., Owego.
1895. Griggs, Elma, 9 E. Seneca Street, Ithaca.
1848. GUERNSEY, EGBERT, 180 W. 59th Street, New York.
1874. Guernsey, William N., 27 W. 52d Street, New York.
1897. Haines, Charles Ter Bush, 91 Main Street, Whitesboro.
1894. Hall, Matthew J., Mamaroneck.
1889. Hallock, J. Henry, Keene Valley.
1897. Hamlin, Frederick William, 103 W. 48th Street, New York.
1894. Hann, Lucy M., 100 West Eighteenth Street.
1897. Hardy, William James, Belmont.
1897. Harrison, Herbert Alexander, Cooperstown.
1895. Hartman, W. Louis, "The Kenyon," 601 Warren Street, Syracuse.

1875. Hasbrouck, Everett, 369 Ninth Street, Brooklyn.
1892. Hathaway, Henry S., 146 W. 92d Street, New York.
1895. Hawley, Hercules R., Staatsburg.
1897. Helfrich, Charles H., 64 W. 49th Street, New York.
1853. HELMUTH, WILLIAM TOD, 504 Fifth Avenue, New York.
1887. Helmuth, William Tod, Jr., 465 Lexington Avenue, New York.
1897. Hilton, Willard M., 435 Penn Avenue, Waverly.
1895. Hodge, William H., 265 Third Street, Niagara Falls.
1897. Hollister, Frederick Kellogg, 521 Madison Avenue, New York.
1887. Holmes, Henry P., Lansingburg.
1897. Hopkins, William Wilder, 114 Main Street, Geneva.
1888. Hough, Walter D., Niagara Falls.
1867. HOUGHTON, HENRY C., 7 W. 39th Street, New York.
1881. Howe, J. Morgan, 58 W. 47th Street, New York.
1874. Hunt, Dwight B., 159 Madison Avenue, New York.
1888. Hurd S. Wright, 73 Main Street, Lockport.
1897. Hussey, Elisha P., 493 Porter Avenue, Buffalo.
1872. HUTCHINS, HORACE S., Batavia.
1895. Hyde, Louis D., Owego.
1897. Irons, Francesca L., Church Street, Brookfield Village.
1896. Johnston, Charles L., 467 Vanderbilt Avenue, Brooklyn.
1874. Jones, Charles E., Albany.
1867. JONES, HENRY C., 220 S. First Avenue, Mount Vernon.
1888. Keegan, William A., 40 S. Clinton Street, Rochester.
1889. Keeler, E. Elmer, 423 E. Jefferson Street, Syracuse.
1874. Keep, Caroline J. Yeomans, 308 W. 36th Street, New York.
1867. KEEP, J. LESTER, 460 Clinton Avenue, Brooklyn.
1895. Keith, Horace G., 107 S. Broadway, Yonkers.
1858. KELLOGG, EDWIN M., 115 E. 37th Street, New York.
1891. King, William Harvey, 64 W. 51st Street, New York.
1887. Kinne, Arthur B., Syracuse.
1894. Laidlaw, George Frederick, 137 W. 41st Street, New York.
1887. Laird, F. F., Utica.
1874. Laird, William T., Watertown.
1889. Leal, Malcolm, 107 W. 48th Street, New York.
1888. Lee, John Mallory, 89 Plymouth Avenue, Rochester.
1886. Le Seur, John Wesley, Batavia.
1897. Lewis, Frederick Daniel, 188 Franklin Street, Buffalo.
1877. Lewis, F. Park, 454 Franklin Street, Buffalo.
1871. LEWIS, HENRY M., "Florence," 18th St. and 4th Ave., New York.
1895. Lines, Mary Louise, 344 Washington Avenue, Brooklyn.
1895. MacBride, Nathaniel Louis, 138 W. 43d Street, New York.
1892. MacCallum, John H., 408 Monroe Avenue, Rochester.
1874. McDonald, William O., 117 W. 44th Street, New York.
1886. McDowell, Charles, 116 W. 13th Street, New York.
1891. McDowell, George W., 136 W. 130th Street, New York.
1891. McMichael, Arkell R., 969 Madison Avenue, New York.
1895. Maeder, John G., 304 E. 120th Street, New York.
1848. MARCY, ERASTUS E., 396 Fifth Avenue, New York.
1897. Marcy, Henry William, 1148 Main Street, Buffalo.
1897. Martin, Leslie, 23 Genessee, Baldwinsville.

1891. Martin, Lynn A., 74 Exchange Street, Binghamton.
1892. Martin, Truman J., 245 North Street, Buffalo.
1887. Maycock, Burt J., 33 Allen Street, Buffalo.
1887. Milbank, William E., 111 State Street, Albany.
1883. Miller, John, 48 St. John's Place, Buffalo.
1895. Mills, Walter Sands, 152 W. 119th Street, New York.
1888. Minton, Henry Brewster, 165 Joralemon Street, Brooklyn.
1871. MITCHELL, JOHN J., Newburgh.
1881. Moffat, John L., 17 Schermerhorn Street, Brooklyn.
1876. Monmonier, Julius L., 480 Classon Avenue, Brooklyn.
1891. Montgomery, Richard W., 48 W. 94th Street, New York.
1897. Mosher, Charles Leonard.
1869. MOSSMAN, NATHAN A., 28 E. 47th Street, New York.
1892. Nead, William M., 205 State Street, Albany.
1895. Neilson, Howard Stout, 46 W. 48th Street, New York.
1886. Nickelson, W. H., A. D. Ripley Block, Adams.
1889. Norton, Arthur B., 16 W. 45th Street, New York.
1881. Nott, Frederick J., 554 Madison Avenue, New York.
1889. O'Connor, Joseph T., 18 W. 43d Street, New York.
1897. Ogden, Edwin G., 451 West End Avenue, New York.
1883. Ormes, Francis D., Jamestown.
1876. Ostrom, Homer I., 42 W. 48th Street, New York.
1892. Palmer, A. Worrall, 138 W. 81st Street, New York.
1848. PALMER, MILES W., 235 E. 18th Street, New York.
1881. Pardee, Ensign B., 218 W. 34th Street, New York.
1897. Parker, Frank D., 101 Main Street, Akron.
1897. Parsons, Thomas, 33 S. Clinton Street, Rochester.
1873. PATCHEN, GEORGE H., 11 E. 59th Street, New York.
1892. Paul, William Kendall, Belmont.
1867. PEARSALL, S. J., Saratoga Springs.
1895. Pease, Charles G., 101 W. 72d Street, New York.
1897. Pettet, Isabella Margaretta, 308 E. 15th Street, New York.
1890. Phillips, R. Oliver, 257 Warburton Avenue, Yonkers.
1891. Pierce, Willard I., 64 W. 126th Street, New York.
1887. Pope, Willis G., Keeseville.
1887. Porter, Eugene H., 181 W. 73d Street, New York.
1894. Powel, Milton, 163 W. 76th Street, New York.
1859. PRATT, LESTER M., Homer.
1887. Putnam, William B., 34 Wilder Avenue, Hoosick Falls.
1881. Rankin, Egbert G., 226 W. 59th Street, New York.
1897. Reed, William Emory, Washingtonville.
1891. Reynolds, Warren U., 320 Manhattan Ave., New York.
1897. Rice, Alvin B., 117 Fairmont Avenue, Jamestown.
1887. Richards, Llewellyn B., Oswego.
1890. Richardson, Andrew J., 39 E. 83d Street, New York.
1872. RICHARDSON, B. M., 151 Milton Street, Brooklyn.
1891. Richardson, George W., 138 E. 79th Street, New York.
1891. Ricker, Marcena S., 58 Lannir Street, Rochester.
1897. Rieger, Joseph, 404 Central Avenue, Dunkirk.
1892. Roberts, David J., New Rochelle.
1892. Roberts, George W., 1672 Broadway, New York.
1891. Robinson, Franklin E., Carthage.

1866. ROBINSON, S. A., West New Brighton.
1897. Royal, T. Cook, 101 Milton Avenue, Ballston Spa.
1897. Rudderow, Edward Douglas, 233 W. 83d Street, New York
1892. Russell, H. Everett, 30 E. 74th Street, New York.
1894. Schenck, Herbert Dana, 241 McDonough Street, Brooklyn.
1875. Schley, James Montfort, 1 E. 42d Street, New York.
1891. Schumann, Carl, Delhi.
1886. Scott, William H., 104 W. 44th Street, New York.
1897. Seward, Frederick W., Main Street, Goshen, Orange Co.
1894. Seward, John Perry, 113 W. 85th Street, New York.
1870. SHELDON, J. W., 402 Warren Street, Syracuse.
1886. Shelton, George G., 521 Madison Avenue, New York.
1895. Shepard, George Andrew, 1672 Broadway, New York.
1891. Shepard, Jessie, 21 Irving Place, Buffalo.
1894. Sherman, Irving Prescott, 114 W. 44th Street, New York.
1897. Sherwood, Bradford Wyckoff, 1117 South Salina Street, Syracuse.
1881. Simon, Samuel H., 71 Orange Street, Brooklyn.
1881. Simmons, Daniel, 97 Lee Avenue, Brooklyn.
1889. Skinner, Scott W., Le Roy.
1883. Slaught, James E., Warsaw.
1895. Smith, Frederick R., 400 E. Main Street, Rochester.
1860. SMITH, HENRY M., 288 St. Nicholas Avenue, New York.
1886. Smith, Sarah N., Stillwater, New York.
1869. SMITH, ST. CLAIR, 25 W. 50th Street, New York.
1860. SMITH, T. FRANKLIN, 264 Lenox Avenue, New York.
1887. Snyder, Edward E., Binghamton.
1897. Southall, Edw. W., Geneseo.
1871. SOUTHWICK, AUGUSTUS B., 107 West Liberty Street, Rome.
1895. Spalding, Julia H., 39 N. Main Street, Cortland.
1897. Stearns, George Raynolds, 207 Linwood Avenue, Buffalo.
1892. Stevens, David D., 1770 Broadway, New York.
1897. Stewart, George Taylor, Metropolitan Hospital, New York.
1895. Storer, John Hudson, 30 Edgecombe Avenue, New York.
1883. Stumpf, Daniel B., 631 Ellicott Street, Buffalo.
1897. Summer, Charles Oliver, 4 Park Street, Norwood.
1881. Sumner, Charles R., Rochester.
1887. Swett, Emily F., Medina.
1874. Talcott, Selden H., Middletown.
1890. Talmage, Alonzo L., Waterloo.
1872. TALMAGE, JOHN F., 157 Joralemon Street, Brooklyn.
1892. Teets, Charles E., 37 W. 39th Street, New York.
1875. Terry, Marshall O., 196 Genesee Street, Utica.
1867. THOMPSON, JOHN H., 36 E. 30th Street, New York.
1867. THOMPSON, VIRGIL, 56 W. 21st Street, New York.
1891. Townsend, Irving, 67 W. 46th Street, New York.
1888. Trotter, Richard R., 189 Warburton Avenue, Yonkers.
1891. Tuttle, Edward G., 61 W. 51st Street, New York.
1881. Tytler, George E., 113 W. 126th Street, New York.
1897. Valentine, Richard K., 33 8th Avenue, Brooklyn.
1887. Van Denberg, M. W., Fort Edward.
1889. Van den Burg, William H., 1 E. 42d Street, New York.

1895. Van Loon, Arthur Burton, 50 Eagle Street, Albany.
1896. Vehslage, Samuel H., 117 W. 43d Street, New York.
1891. Ver Nooy, Charles, 146 W. 64th Street, New York.
1895. Von der Lühe, Amelia D. F., 801 Driggs Avenue, Brooklyn.
1897. Wage, John F., 414 Seneca Street, Buffalo.
1874. Wait, Phœbe J. B., 9th Avenue and 34th Street, New York.
1891. Walrad, Caleb B., 21 N. Perry Street, Johnstown.
1898. Warner, Alton G., 194 Schermerhorn Street, Brooklyn.
1854. WATSON, WILLIAM H., 270 Genesee Street, Utica.
1892. Wellington, James F., 64 E. 2d Street, Corning.
1858. WEST, EDWIN, 155 W. 12th Street, New York.
1866. WETMORE, JOHN McE., 41 E. 29th Street, New York.
1860. WHITE, THEODORE C., 21 S. Clinton Street, Rochester.
1883. Wilcox, De Witt G., 568 Delaware Avenue, Buffalo.
1886. Wilcox, Sydney F., 51 W. 52d Street, New York.
1855. WILDER, LOUIS DE V., 55 W. 33d Street, New York.
1893. Williams, Frank Fay, 6 Goodrich Street, Canton.
1892. Willis, Harrison, 695 Lafayette Avenue, Brooklyn.
1892. Winchell, Walter B., 137 Berkeley Place, Brooklyn.
1886. Wolcott, Edwin H., 57 S. Union Street, Rochester.
1869. WOODWARD, A. M., 128 W. 13th Street, New York.
1869. WRIGHT, ALBERT R., 414 Elmwood Avenue, Buffalo.
1897. Young, William Dickson, 29 Park Street, Buffalo.
1897. Zwetsch, J. D., Main Street, Gowanda.

North Dakota.

1891. De Puy, Richard G., Jamestown.
1887. Hobart, W. F., Oakes.
1889. Rutledge, Samuel W., Grand Forks.
1889. Vidal, James W., Fargo.

Ohio.

1894. Ames, Charles S., Ada.
1896. Baldinger, Arthur F., 670 Euclid Avenue, Cleveland.
1892. Baldwin, Henry D., Elyria.
1898. Barbee, B. I., 60 E. Broad Street, Columbus.
1894. Barnhill, Tobias G., 208 S. Main Street, Findlay.
1868. BAXTER, HARRIS H., 275 Prospect Street, Cleveland.
1865. BECKWITH, D. H., 528 Prospect Street, Cleveland.
1876. Beebe, Henry E., Sidney.
1868. BIGGAR, H. F., Cleveland.
1891. Bittinger, Frank D., 23 W. 4th Street, Dayton.
1896. Bowman, Isaac N., Upper Sandusky.
1890. Brickley, Laura C., Chase and Hamilton Avenues, Cincinnati.
1869. BUCK, J. D., 124 W. 7th Street, Cincinnati.
1892. Carpenter, Willard B., 657 N. High Street, Columbus.
1897. Carter, Rolla Bert, 106 Adolph Avenue, Akron.
1890. Chapman, Edward E. K., Defiance.
1882. Church, T. T., 70 E. Main Street, Salem.
1887. Claypool, Albert, Toledo.

1874. Crank, C. D., 106 Auburn Avenue, Cincinnati.
1898. Crawford, John M., Auburn Avenue, Cincinnati.
1893. Crismore, J. M., Helena.
1897. Curtis, Harry N., 314 Second Street, Marietta.
1896. Dixey, Mabel G., 401 Chrogan Street, Fremont.
1897. Ellis, J. Tressler, Waynesville.
1893. Fackler, Joshua M., Plymouth.
1882. Fahnestock, Joseph C., Piqua.
1890. Gann, John A., 53 N. Market Street, Wooster.
1881. Geiser, S. R., 1511 Baymiller Street, Cincinnati.
1891. Geohegan, William A., 918 Hawthorne Ave., Price's Hill, Cincinnati.
1890. Gillard, Edwin, 423 Columbus Avenue, Sandusky.
1897. Goddard, John, Jr., 3514 Main Avenue, Avondale, Cincinnati.
1897. Goldsmith, Alfred E., Home City.
1892. Goodman, Julia, 401 Ross Street, Hamilton.
1898. Gurley, Eber W., 39 Windermere Street, East, Cleveland.
1893. Hastings, William C., 11 S. Washington Street, Van Wert.
1887. Hershberger, Joseph P., 351 E. Main Street, Lancaster.
1883. Horner, J. Richey, 504 Permanent Block, Euclid Avenue, Cleveland.
1875. House, Robert B., Springfield.
1883. Hoyt, Charles, Chillicothe.
1896. Hunt, John S., Athens.
1886. Hunt, Maurice P., "The Ruggery," Columbus.
1887. Jewitt, Edward H., 484 Arcade, Cleveland.
1870. Johnson, R. B., Ravenna.
1873. Jones, Gaius J., 5 Rockwell Street, Cleveland.
1897. Kilgour, Peter Thompson, College Hill.
1892. Kirk, Ellen Maria, 169 W. 7th Street, Cincinnati.
1886. Kraft, Frank, 57 Bell Avenue, Cleveland.
1895. Lehman, Franklin Frees, Kingsbury Block, Sandusky.
1898. Loy, Ed. W., Franklin and Walnut Streets, Troy.
1896. Lunger, Justus S., E. Water Street, Prospect.
1898. Macomber, Addison P., Atlantic.
1894. McClure, John R., 98 E. 2d Street, Portsmouth.
1896. McCormick, A. L., 3110 Woodburn Avenue, Cincinnati.
1873. McDermott, George C., Odd Fellows' Temple, Cincinnati.
1892. Maxwell, Lewis K., 2208 Monroe Street, Toledo.
1895. Meade, Stephen Johnson D., 417 Everett Street, Cincinnati.
1895. Meader, Lee Douglass, 28 W. 7th Street, Cincinnati.
1891. Means, J. W., Troy.
1898. Mitchell, John A., 69 Third Street, Newark.
1890. Morley, F. W., Washington Row, Sandusky.
1873. Morrill, Edwin C., Norwalk.
1894. Morrison, Frank A., 6 S. Main Street, Rock Creek.
1892. Munns, Charles O., Oxford.
1892. Palmer, Owen A., Warren.
1879. Parsons, Katherine, 914 Prospect Street, Cleveland.
1891. Pauly, C. A., Odd Fellows' Temple, Cincinnati.
1897. Phillips, Lincoln, Section Avenue, Hartwell.
1896. Phillips, William A., 89 Euclid Avenue, Cleveland.
1885. Pomeroy, Harlan, 526 Prospect Street, Cleveland.

1896. Probert, Clarence G., 645 W. Madison Avenue, Cleveland.
1891. Quay, George H., 122 Euclid Avenue, East Cleveland.
1885. Reed, Thomas E., Middletown.
1894. Rees, Owen, 314 Erie Street, Toledo.
1894. Rich, Frank, Toledo.
*1897. Rolston, Rose Amanda, 52 High Street, Warren.
1882. Rosenberger, Abraham S., Covington.
1865. RUSH, R. B., 70 E. Main Street, Salem.
1890. Rust, Edwin G., 29 Euclid Avenue, Cleveland.
1860. SANDERS, JOHN C., 608 Prospect Street, Cleveland.
1884. Sanders, J. Kent, 106 Euclid Avenue, Cleveland.
1893. Sawyer, Charles E., Marion.
1897. Schneider, Adolph Benedict, 381 Jennings Avenue, Cleveland.
1892. Schulze, Carl A., 49 E. Main Street, Columbus.
1882. Sherwood, H. A., Warren.
1896. Sigrist, Christopher W., 31 S. 5th Street, Columbus.
1896. Sigrist, Philip H., E. High Street, New Philadelphia.
1894. Snow, Henry, Norwood.
1892. Steddon, Charles, Monroe.
1892. Stephens, James A., 1350 Euclid Avenue, Cleveland.
1879. Stone, Martha M., 104 Prospect Street, Cleveland.
1896. Turner, Estelle.
1870. VAN NORMAN, H. B., 289 Pearl Street, Cleveland.
1897. Waite, Kent B., 176 Euclid Avenue, Cleveland.
1874. Walton, Charles E., N. W. cor. 7th and John Streets, Cincinnati.
1893. Watts, William, 339 Huron Street, Toledo.
1896. Wiggers, Henry H., 529 Everett Street, Cincinnati.
1895. Wilder, Guert Elmore, Masonic Temple, Sandusky.
1876. Wilson, Joseph H., Bellefontaine.
1865. WILSON, T. P., 132 Arlington Street, Cleveland.
1897. Winship, Annette Thomas, 517 Prospect Street, Cleveland.
1897. Wolcott, Roy C., St. Paris.
1886. Wood, James C., 122 Euclid Avenue, Cleveland.

Oregon.

1886. Jefferds, Henry Clarke, 67 Dakom Building, Portland.
1891. Macrum, Charles A., Marquam Block, Portland.
1889. Miller, Byron E., "The Dekum," Portland.
1876. Nichols, Ammi S., 608 Dekum Block, Portland.

Pennsylvania.

1897. Allen, John V., 4637 Frankfort Avenue, Philadelphia.
1871. ALLEN, RICHARD C., 4419 Frankford Avenue, Philadelphia.
1892. Baier, George F., Norwood.
1886. Bartlett, Clarence, 1506 Arch Street, Philadelphia.
1891. Bayley, Weston D., 1434 Poplar Street, Philadelphia.
1846. BERENS, JOSEPH, 1500 Green Street, Philadelphia.
1870. BETTS, B. FRANK, 1609 Girard Avenue, Philadelphia.
1887. Bier, Peter A., 4200 Butler Street, Pittsburg.

1876. Bigler, William H., 118 N. 17th Street, Philadelphia.
1871. BINGAMAN, C. F., 922 Penn Avenue, Pittsburg.
1894. Blair, William Wightman, 406 Penn Avenue, Pittsburg.
1895. Boericke, Felix A., 1011 Arch Street, Philadelphia.
1865. Boericke, F. E., 6386 Drexel Road, Philadelphia.
1892. Boileau, John D., 804 Lehigh Avenue, Philadelphia.
1897. Boone, George H., 307 Washington Street, Pottsville.
1871. BOWIE, ALONZO P., 87 Main Street, Uniontown.
1869. BOWMAN, BENJAMIN, Chambersburg.
1870. BOYER, FRANCIS W., Pottsville.
1869. BRADFORD, THOMAS L., 1862 Frankford Avenue, Philadelphia.
1891. Branson, Mary, 1719 Arch Street, Philadelphia.
1896. Brewster, Frederick D., 330 Washington Avenue, Scranton.
1891. Brown, Christian H., 1824 Diamond Street, Philadelphia.
1898. Brown, Samuel G. A., 60 E. Main Street, Shippensburg.
1892. Brown, William K., 1311 N. Broad Street, Philadelphia.
1892. Bull, Wm. K. K., Elmhurst.
1887. Bullard, J. Arthur, Wilkesbarre.
1854. BURGHER, JOHN C., 960 Penn Avenue, Pittsburg.
1897. Calhoun, John Charles, 75 Arch Street, Allegheny.
1891. Carmichael, Thomas H., 7127 Germantown Ave., Germantown, Phila.
1895. Champlin, Henry William, 37 West Main Street, Bloomsburg.
1875. Chapman, Millie J., 804 Penn Avenue, Pittsburg.
1894. Chase, Theodore Livingstone, 1687 N. 54th Street, Philadelphia.
1898. Christine, Gordon M., 2043 W. 12th Street, Philadelphia.
1888. Closson, James H., 53 W. Chelten Avenue, Germantown, Philadelphia.
1892. Cooke, Mary A., 2113 N. 18th Street, Philadelphia.
1891. Coolidge, John W., 334 Washington Avenue, Scranton.
1866. COOPER, J. F., 105 Arch Street, Allegheny City.
1894. Cooper, William Henry, P. O. Box 140, Oakmont.
1874. Corbin, John L., 245 Main Street, Athens.
1878. Cranch, Edward, Erie.
1892. Crawford, Katherine M., 131 N. Main Street, Chambersburg.
1892. Curran, Edwin J., Oil City.
1866. DAKE, B. F., 815 Penn Avenue, Pittsburg.
1858. DETWILLER, JOHN J., Easton.
1878. Dinsmore, Samuel W. S., Sharpsburg.
1869. DUDLEY, PEMBERTON, 1405 N. 16th Street, Philadelphia.
1892. Dudley, Perry Hall, 1405 N. 16th Street, Philadelphia.
1871. EDMUNDSON, WALTER F., 1321 Fifth Avenue, Pittsburg.
1891. Everhart, Oliver T., Hanover.
1871. FAGER, CHARLES B., 120 Walnut Street, Harrisburg.
1872. FULTON, HENRY W., cor. Ripley and Highland Avenue, Pittsburg.
1894. Furman, Horace S., 1705 Tioga Street, Philadelphia.
1897. Gifford, Edward F., 402 W. 8th Street, Erie.
1891. Gilbert, Irwin B., 2027 Columbia Avenue, Philadelphia.
1891. Godshall, Samuel G., Edge Hill.
1891. Goff, Ella D., 41 N. Diamond Street, Allegheny.
1887. Goodno, William C., 1733 Chestnut Street, Philadelphia.
1869. GRAMM, GUSTAVUS E., Ardmore.
1896. Gramm, Theodore J., 846 N. Broad Street, Philadelphia.

1896. Gregg, Edward R., 334 S. Highland Avenue, Pittsburg.
1897. Griffith, John B., Lewistown.
1891. Griffith, Lewis B., 2526 Ridge Avenue, Philadelphia.
1891. Griffith, Silas, 1431 Girard Avenue, Philadelphia.
1891. Griffith, William M., 1827 N. 17th Street, Philadelphia.
1875. Guernsey, Joseph C., 1923 Chestnut Street, Philadelphia.
1867. Gumpert, B.B., 840 Franklin Street, Philadelphia.
1847. Guy, Samuel S., 2517 Parrish Street, Philadelphia.
1895. Haines, Oliver Sloan, 137 N. 15th Street, Philadelphia.
1892. Hall, P. Sharpless, 1604 Arch Street, Philadelphia.
1897. Hancock, Elmer E., 1443 N. 17th Street, Philadelphia.
1893. Hancock, Joseph, 1639 Columbia Avenue, Philadelphia.
1892. Hassler, J. Wyllis, 1503 Poplar Street, Philadelphia.
1892. Hassler, M. Margaret, 105 N. 8th Street, Allentown.
1881. Hassler, William A., 105 N. 8th Street, Allentown.
1887. Heilner, Herbert Franklin, Burr Building, Scranton.
1892. Heritage, Alfred C., Jenkintown.
1874. Herron, Charles D., 3505 Butler Street, Pittsburg.
1880. Hofmann, Charles H., 510 S. Highland Avenue, Pittsburg.
1891. Hubbard, Charles H., 8th and Madison Streets, Chester.
1893. Irwin, Thomas A., 1234 Liberty Street, Franklin.
1887. Ivins, Horace F., 1621 Chestnut Street, Philadelphia.
1859. James, Bushrod W., cor. Green and 18th Streets, Philadelphia.
1897. James, D. Bushrod, 2005 N. 12th Street, Philadelphia.
1866. James, John E., 1521 Arch Street, Philadelphia.
1897. Johnson, Frederick Charles, 191 Congress Street, Bradford.
1860. Johnson, Isaac D., Kennett Square.
1886. Johnson, Theodore M., 200 Susquehanna Avenue, Pittston.
1892. Jones, John J., 1802 Mount Vernon Street, Philadelphia.
1858. Jones, Joseph E., West Chester.
1893. Karsner, Charles W., 316 S. 12th Street, Philadelphia.
1891. Kistler, Abraham L., 115 N. 9th Street, Allentown.
1871. Knerr, Calvin B., 1137 Spruce Street, Philadelphia.
1897. Knowlton, James Mathews, S. 9th Street, Indiana.
1875. Korndœrfer, Augustus, 1728 Green Street, Philadelphia.
1897. Korndœrfer, Augustus, Jr., 1728 Green Street, Philadelphia.
1892. Krewson, Amos D., 4613 Paul Street, Frankford, Philadelphia.
1895. Lawrence, F. Mortimer, 1601 Girard Avenue, Philadelphia.
1891. Layman, Alfred, 1630 N. 18th Street, Philadelphia.
1891. Lentz, Levi R., Fleetwood.
1891. Macfarlan, Duncan, 3924 Chestnut Street, Philadelphia.
1868. Macfarlan, Malcolm, 1805 Chestnut Street, Philadelphia.
1896. McCauley, John C., 128 Connecticut Street, Rochester.
1879. McClelland, John B., 409 Penn Avenue, Pittsburg.
1867. McClelland, James H., 5th and Wilkins Avenues, Pittsburg.
1884. McClelland, Robert Watson, 5th and Wilkins Avenue, Pittsburg.
1881. McClure, Eliza Lang, 1919 Wallace Street, Philadelphia.
1891. Maddux, Daniel P., 700 Madison Street, Chester.
1891. Malin, William H., Chestnut Hill, Philadelphia.
1894. Mansfield, Harry Knox, 19 W. Chelten Avenue, Germantown, Phila.
1881. Mansfield, Job R., 4852 Main Street, Germantown, Philadelphia.

1892. Marshall, Anna M., 1928 Chestnut Street, Philadelphia.
1890. Marshall, Robert S., 424 Shady Avenue, Pittsburg.
1871. MARTIN, CONSTANTINE H., Allentown.
1878. Martin, W. J., 1712 Carson Street, S. S., Pittsburg.
1894. Maurer, Joseph M., 59 W. Wheeling Street, Washington.
1891. Mercer, Edward W., 157 N. 15th Street, Philadelphia.
1871. MERCER, ROBERT P., 223 W. 3d Street, Chester.
1897. Mickle, J. Byron, Main Street, Cambridge Springs.
1871. MIDDLETON, CALEB S., 1523 Girard Avenue, Philadelphia.
1888. Miller, Zachary T., 2013 Carson Street, Pittsburg.
1875. Mitchell, John N., 1505 Spruce Street, Philadelphia.
1876. Mohr, Charles, 1823 Green Street, Philadelphia.
1896. Moon, Seymour B., 1314 Eighth Avenue, Beaver Falls.
1896. Mueller, Gustave A., 400 Penn Avenue, Pittsburg.
1895. Myers, Charles E., 170 Green Lane, Manayunk, Philadelphia.
1887. Norton, Claude R., 700 N. 40th Street, Philadelphia.
1891. Nowell, John F., Greencastle.
1883. Parsons, Anson, Springboro.
1888. Parsons, Edgar C., Meadville.
1884. Perkins, Charles W., 403 Broad Street, Chester.
1896. Perrine, J. K. M., 413 Penn Avenue, Pittsburg.
1872. PETTENGILL, ELIZA F., 300 N. 10th Street, Philadelphia.
1895. Pollock, Martha Hays, 232 N. 2d Street, Harrisburg.
1894. Posey, Louis Plumer, 1435 Walnut Street, Philadelphia.
1888. Powell, William C., Bryn Mawr.
1891. Pratt, Trimble, Media.
1893. Pursell, James Perry, Easton.
1865. RANKIN, JOHN S., cor. Roup and Howe Avenues, Pittsburg.
1881. Reading, J. Herbert, 1811 Green Street, Philadelphia.
1888. Reading, Thomas, Hatboro.
1897. Redman, John L., 1336 Spruce Street, Philadelphia.
1888. Reeves, Joseph M., 1609 Mount Vernon Street, Philadelphia.
1883. Ridge, Jonathan T., 1617 N. 7th Street, Philadelphia.
1897. Rinehart, Stanley Marshall, 293 Western Avenue, Allegheny.
1891. Roberts, Charles W., 638 Washington Avenue, Scranton.
1893. Rotzell, Willett Enos, Narberth.
1871. SARTAIN, HARRIET J., 212 West Logan Square, Philadelphia.
1892. Schmucker, F. R., 228 N. 5th Street, Reading.
1893. Schoonover, Wm. Ed., Greeville.
1891. Schwenk, Clayton S., 1319 Jefferson Street, Philadelphia.
1891. Seibert, William A., Easton.
1869. SEIP, C. P., 636 Penn Avenue, Pittsburg.
1895. Seitz, William Clinton, Glen Rock.
1895. Sharpless, Edward S., 1329 N. 12th Street, Philadelphia.
1893. Shellenberger, Charles Nell, 1831 Wallace Street, Philadelphia.
1897. Simmons, Clarence W., 1628 N. 18th Street, Philadelphia.
1888. Simmons, Silas S., Susquehanna.
1876. Slough, Frank J., Allentown.
1888. Slough, William C. J., Emaus.
1894. Smedley, Charles Davis, Wayne.
1897. Smedley, Isaac G., 1705 Arch Street, Philadelphia.

1896. Smith, Dudley, 1834 S. Logan Square, Philadelphia.
1891. Snader, Edward R., 140 N. 20th Street, Philadelphia.
1891. Spencer, William, 1820 Chestnut Street, Philadelphia.
1890. Starr, Pearl, Bellevue.
1893. Stem, Henry L., Union City.
1887. Swalm, Thomas W., Pottsville.
1879. Swartz, J. Ross, Harrisburg.
1875. Thomas, Charles M., 1623 Arch Street, Philadelphia.
1887. Thompson, James Henry, 515 Penn Avenue, Pittsburg.
1887. Thompson, Landreth W., 1701 Green Street, Philadelphia.
1897. Tomlin, Richard Elmer, 2057 N. 8th Street, Philadelphia.
1891. Tomlinson, William H., 44 E. Walnut Lane, Germantown.
1892. Tuller, John J., 1923 Chestnut Street, Philadelphia.
1889. Van Baun, William W., 1402 Spruce Street, Philadelphia.
1891. Van Deusen, Edwin H., 2105 Tioga Street, Philadelphia.
1894. Van Lennep, Gustave Adolphe, 1421 Spruce Street, Philadelphia
1886. Van Lennep, William B., 1421 Spruce Street, Philadelphia.
1891. Vischer, Carl V., 1429 Poplar Street, Philadelphia.
1895. Wait, Oliver B., 1230 S. 57th Street, Philadelphia.
1893. Walter, Robert, Walter's Park.
1891. Ward John McE., 1915 Susquehanna Avenue, Philadelphia.
1894. Waylan Julia Gould, 1832 Tioga Street, Philadelphia.
1882. Weaver, Chandler, Fox Chase P. O., Philadelphia.
1897. White, A. Grace, 87 Main Street, Bradford.
1887. White, Roland T., 273 Western Avenue, Allegheny.
1867. WILLARD, L. H., 236 Western Avenue, Allegheny.
1872. WILLIAMSON, MATTHEW S., 1311 Arch Street, Philadelphia.
1881. Yoder, Daniel, Catasauqua.
1898. Ziegenfus, A. Frank, 1124 Wallace Street, Philadelphia.

Rhode Island.

1895. Allison, George Freeman, Warren Avenue, East Providence.
1891. Barnard, Charles A., Centerdale.
1897. Bennett, John Hillman, 142 High Street, Pawtucket.
1876. Brown, Asa W., 27 Burnett Street, Providence.
1892. Brown, Lucy H. A., 274 Broad Street, Providence.
1868. BUDLONG, JOHN C., Providence.
1898. Budlong, Martin S., 604 Westminster Street, Providence.
1895. Chace, Nathaniel Ray, 89 Touro Street, Newport.
1895. Crocker, Harry Clinton, Common Street, Providence.
1890. Gooding, Gertrude, Bristol.
1885. Gottschalck, William von, Central Falls.
1881. Green, Charles L., 16 Jackson Street, Providence.
1874. Hall, Robert, 117 Broad Street, Providence.
1895. Hasbrouck, Cornelius J., Hope Street, Bristol.
1887. Hasbrouck, Sayer, 117 Broad Street, Providence.
1895. Hunt, Annie W., 217 Washington Street, Providence.
1894. Jenks, Frank R., 332 Main Street, Pawtucket.
1895. Kingsbury, Edward N., 93 Blackstone Street, Woonsocket.
1896. Lance, John D., Broadway, Providence.

1895. Lippitt, Louis Davis, 24 Dyer Avenue, Olneyville.
1881. Moss, Mary Denison, 231 Broadway, Providence.
1895. Pagan, Frank C., Westerly.
1879. Peck, George B., 865 N. Main Street, Providence.
1885. Reed, Robert G., Woonsocket.
1895. Sanger, Henry Mortimer, 1040 Westminster Street, Providence.
1867. SAWIN, ISAAC W., 582 Broadway, Providence.
1898. Spooner, Henry M., Providence.
1895. Squire, Abiram F., 38 Catharine Street, Newport.
1895. Stanton, Nathaniel Green, 9 Kay Street, Newport.
1887. Stone, Waldo H., 133 Orms Street, Providence.
1895. Thurber, Emily M., 170 Broad Street, Providence.
1893. Webster, Samuel C., 99 High Street, Westerly.
1888. Whitmarsh, Henry A., Jackson Street, Providence.
1895. Wood, Lorin Francis, 37 Elm Street, Westerly.

South Dakota.

1888. Fowler, De Witt C., Aberdeen.
1893. Fulford, George Howard, 233 Philips Avenue, South Sioux Falls.

Tennessee.

1877. DAKE, WALTER M., 218 N. Vine Street, Nashville.
1872. Dake, William C., 218 N. Vine Street, Nashville.
1874. McGarock, Clara Plimpton, P. O. Box 346, Nashville.
1896. McMillan, Frances, Jackson Building, Nashville.
1876. Price Emmor H., 400 Georgia Avenue, Chattanooga.
1894. Wilson, Charles Gaston, 203 Main Street, Clarksville.

Texas.

1893. Blackman, George Edwin, Vernon.
1893. Bliem, Milton J., 425 Navarro Street, San Antonio.
1886. Jones, Joseph, San Antonio.
1876. Mercer, William M., Galveston.
1894. Pollock, Joseph Robert, Fort Worth.
1896. Smith, Mark H., Peavland.
1895. Stiles, Hunter Bell, Grand Avenue, Gainesville.
1873. WARREN, H. ANNA, 817 Bond Street, Dennison.
1892. Williams, Perry C., Texarkana.

Utah.

1893. Hanchett, James C., Salt Lake City.
1893. White, John T., 29 S. State Street, Salt Lake City.

Vermont.

1895. Colvin, Harvey E., 150 Cherry Street, Burlington.
1886. Gale, Charles A., Rutland.
1893. Kirkland, Edward, Bellow's Falls.
1887. Smith, Melvin D., Middlebury.
1859. SPARHAWK, GEORGE E. E., Burlington.
1881. Wyman, Edmond L., Manchester Centre.

Virginia.

1853. SKILES, FRANCIS W., Suffolk.
1881. Webster, Frank P., 136 Freemason Street, Norfolk.
1891. Young, Charles B., 1102 Church Street, Lynchburg.

Washington.

1870. BAGLEY, H. B., Seattle.
1898. Fletcher, Cyrus G., North Yakima.
1897. Grove, Charles E., Hyde Block, Spokane.
1893. Olmsted, Elmer D., Spokane.
1892. Young, E. Weldon, 1023 Columbia Street, Seattle.

West Virginia.

1892. Day, George F., Martinsburgh.
1892. Fawcett, John M., 1116 Market Street, Wheeling.
1846. RHEES, MORGAN J., Wheeling.
1897. Roberts, Arthur Augustine, Willsburg.
1896. Wells, George S., Sisterville.

Wisconsin.

1894. Austin, Edson C., Elkhorn.
1870. BEEBE, E. W., 173 Wisconsin Street, Milwaukee.
1890. Brown, Dagmar M., Waupaca.
1893. Brown, Eugene A., 121 E. Washington Avenue, Madison.
1889. Carlson, Oscar W., 425 Milwaukee Street, Milwaukee.
1890. Cole, Beder A., West Lima.
1892. Davis, John J., 504 Monument Square, Racine.
1895. Forsbeck, Filip A., 425 Milwaukee Street, Milwaukee.
1889. Gorton, Fred T., Portage.
1898. Greiner, Frank W., Two Rivers.
1889. Hassell, Samuel E., Lancaster.
1897. Irving, Walter W., 173 Wisconsin Street, Milwaukee.
1890. Johnson, Solomon D., 403 Grand Avenue, Milwaukee.
1890. Kaetel, Charles H., Maysville.
1876. Kanouse, Abijah W., Appleton.
1890. Kanouse, Edward M., Wausau.
1894. Kenyon, Frances Aureola, Kenosha.
1890. Leland, A. G., Whitewater.
1880. Lewis, Joseph, Jr., 330 Hanover Street, Milwaukee.
1898. McConnell, Carl P., West Salem.
1889. Noble, James H., Eau Claire.
1890. Olmstead, Austin Frederick, Green Bay.
1890. Paine, Richard K., Manitowoc.
1870. PENNOYER, N. A., Kenosha.
1890. Perkins, Ernest D., Ashland.
1894. Pillsbury, Cassius C., Superior.
1893. Ripley, George H., Kenosha.

1890. Russell, Henry A., West Superior.
1894. Schmitz, Elsie R., Milton.
1875. Sherman, Lewis, 171 Wisconsin Street, Milwaukee.
1890. Stiles, Fred P., Sparta.
1890. Sutherland, Quincy O., Janesville.
1890. Suttle, Henry J., Viroqua.
1890. Treat, Charles R., Jr., Sharon.

Unknown.

1893. Bailey, Alfred G.
1894. Cameron, Watts.
1894. Morse, John Newton.
1892. Telson, Mary K.

Recapitulation.

Senior Members,	229
Alphabetical List (including Senior Members),	1,659

NOTICES OF DECEASED MEMBERS.

By Henry M. Smith, M.D., Necrologist, New York, N. Y.

SARAH AMELIA BARNET, M.D.,

Of New York, was elected a member of the Institute in 1881, at the session held at Brighton Beach. She was the daughter of David and Mary G. Barnet, and was born in Newark, N. J., July 28, 1814. She attended private schools in her native city, and when nearly fifty years of age began the study of medicine with Dr. Clemence C. Lozier, about the year 1863, attended lectures at the New York Medical College for Women, and graduated therefrom at its second Commencement, 1865. She was a member of several medical societies, but took no active part in their proceedings, her practice engrossing her whole attention. She died in New York, December 26, 1897.

ASAHEL HOUGHTON BIRDSALL, M.D.,

Of Brooklyn, N. Y., was elected a member of the Institute at Saratoga Springs in 1887. He was of Quaker stock, the son of Solomon and Phœbe Birdsall, and was born at Newburgh, N. Y., August 15, 1851. Working on a farm summers, he attended the district school through the winters. After an academic course at the "Friends' Boarding-school," Providence, R. I., he began the study of medicine with his brother, our fellow-member, Dr. Stephen T. Birdsall, of New York. He attended lectures at Bellevue Hospital Medical College, New York, and the Hahnemann Medical College of Philadelphia, graduating from the latter in 1873, when he returned to New York, and entered into partnership with his brother. On the removal of the latter from the city, on account of ill-health and retirement from practice, he succeeded him and settled in Brooklyn, where he continued until his death, August 8, 1897. Dr. Birdsall was married in 1874 to Miss Annette Boswell, of New Jersey, who, with three children, survives him. Dr. Birdsall paid close attention to his practice, and took but little interest in society matters, though a member of the Kings County Society as well as of the Institute.

JOSEPH CANFIELD BOARDMAN, M.D.,

Of Trenton, N. J., was the last survivor of those homœopathic physicians who organized the Institute in 1844. He was the son of James Simeon and Lucinda (Canfield) Boardman, and was born in Wethersfield, Conn., May 4, 1813. He was a descendant, in the fifth generation, of Samuel Boreman

(as the name was formerly spelled), who emigrated from England, and settled in Massachusetts in 1638, removing to Wethersfield in 1640. Dr. Boardman attended the public schools in his native town, and later the Westfield Academy at Westfield, Mass., where he graduated. He afterward taught school in Pennsylvania. He studied medicine with Dr. Neff, of Lancaster, attended lectures at the Pennsylvania Medical College, and later the Department of Medicine of the University of Pennsylvania, from which he graduated in 1844.

He began practice in 1845 at Trenton, where he continued until his death, with the exception of short intervals at Brooklyn, N. Y., Baltimore, and New York City. At the last named place, he identified himself with the early practitioners of Homœopathy, and took an active part in the societies. It was during his residence in New York that the Institute was founded. Dr. Boardman was not married. He died July 26, 1896.

CARL BOJANUS, M.D.,

Of Samara, Russia, was elected a corresponding member of the Institute in 1887 at Saratoga Springs. He has been a large contributor to our literature, and to him we are indebted for the "History of Homœopathy in Russia," reported to the World's Homœopathic Congress at Philadelphia in 1876. He will be remembered as an honored guest, who, accompanied by his wife, attended our World's Homœopathic Congress in 1893, in Chicago. Dr. Bojanus's family was of Lutheran origin, and in the sixteenth century was exiled from Russia on account of religious differences, and did not return until the reign of Paul, toward the end of the eighteenth century.

Dr. Bojanus was born in 1818. He graduated in 1844 at the Moscow Medical University, entering shortly after upon his career as a homœopathic physician. He suffered for three years from heart difficulty, and was obliged to spend his winters away from home. He died May 28, 1897.

MARTHA ALMINA BOWERMAN, M.D.,

Of Chicago, was elected a member of the Institute in 1893, at the session held in that city. She was the oldest of five children of Porter and Sarah Ann (Knapp) Brink, and was born at Bergen, Genesee county, N. Y., March 27, 1841. During her infancy her parents removed to Churchville, thence to Lake Mills, Wis., afterward to Neenah, and subsequently settled in Ripon. Martha A. Brink attended school at Ripon, and afterward what was known as the Brockway College. In the spring of 1861 she married Nelson Bowerman, and in 1878 settled in Chicago and began the study of medicine with our late associate, Dr. Alvan E. Small, attended lectures at the Hahnemann Medical College of Chicago, and graduated therefrom in 1882. She began practice in Chicago, where she continued till her death, July 31, 1897.

WILLIAM H. BURT, M.D.,

Of Chicago, became a member of the Institute at the World's Congress at Chicago in 1893, at the age of fifty-seven years, when much of his professional work had been done. Besides being present at this session, he attended those at Denver in 1894, and Newport in the following year. He was notably of a modest and retiring disposition, which may explain his not participating in any of the discussions at our meetings, and being appointed but once on one committee, that of Medical Literature in 1895. He was a conscientious and industrious worker, and a voluminous writer on Materia Medica, instituting and publishing many provings.

Dr. Burt was born on a farm in Fredericton, New Brunswick, Canada, February 25, 1836. He was the third son in a family of twelve. When a mere boy he was left in the care of the farm by the death of his father. His schooling was limited and inadequate, inasmuch as his desire was to become a physician. The people of the neighborhood had acquired from the Indians a knowledge of the medicinal uses of the various plants abounding in the locality, hence the beginning of young Burt's studying and experimenting with their effects on animals and human beings. He attended lectures at the Homœopathic Medical College of Pennsylvania, the session of 1856-7, a classmate of Drs. J. W. Dowling, O. B. Gause, H. N. Guernsey, and B. W. James. The following year he attended lectures at the Western Homœopathic College, Cleveland, graduating therefrom in 1858.

He began practice at Mount Clemens, Mich., removing thence to Lyons, Ia. While practising at Lincoln, Ill., where he was for nine years, he contributed the results of his experiments to Dr. Hale's "New Remedies; their Pathogenetic Effects and Therapeutic Application in Homœopathic Practice," published in 1864. Several remedies as Polyporus, oficinalis and pinicola, Ustilago maidis and Cinchona, were later brought out as monographs. In 1869 Dr. Burt published his "Characteristic Materia Medica," which he dedicated to Dr. H. N. Guernsey, "the originator of the characteristic or 'key-note system.'" Of this there were two editions. In 1871 he removed to Chicago and entered into partnership with Dr. Alvan E. Small, soon acquiring a large practice, and devoting his leisure time to materia medica work. In 1881 Messrs. Gross & Delbridge published his "Physiological Materia Medica," of which there were five editions. Among other published works were: "A Chart Illustrating the Action of Remedies," "Therapeutics of Tuberculosis," "Clinical Companion to the Physiological Materia Medica," "The Student's Aid to the Study of the Materia Medica," "Tuberculosis Cured by Sur-Alimentation," "A Characteristic Materia Medica Memorizer."

A few years prior to his death, he accepted the professorship of Materia Medica in the National Medical College of Chicago. He died of apoplexy, January 27, 1897.

ANN ERVILLA CHURCHILL, M.D.,

Of Monroe, Wis., was elected a member of the Institute at its session held at Atlantic City in 1891. She was the only child of Dr. Weaver O. Sherman, and was born in the village of Albion, Erie county, Pa., June 10, 1831. In June, 1848, she removed to Monroe, Wis., studied medicine with her father, and was for several years his assistant. In 1883, after his death, she attended lectures at the Hahnemann Medical College of Chicago, and graduated therefrom in 1886. She married Norman Churchill, February 22, 1854. After practising ten years in Chicago, she went to California to visit a daughter, and died at the residence of her son-in-law, Dr. William G. Cole, at Guernseyville, Cal., July 26, 1896.

PETER DIEDRICH, M.D.,

Of Kansas City, Kan., was elected a member of the Institute at its session at Waukesha in 1890. In attendance at several of our sessions, and, though not serving on any bureau or committee, he contributed a paper giving his experience with "Homœopathic Medicines as Prophylactics," and has taken part in the discussions.

He was born in Ernzen, Prussia, in 1842. He attended school at Echternacht, Treves, and Metz, and later completed his university course at Strasburgh. This was followed by a course in medicine, and graduation in 1870.

After practising three years he came to this country in the spring of 1873, and began the practice of his profession at Wyandotte, now Kansas City, Kan. He attended a course of lectures at the Homœopathic Medical College at St. Louis in 1876-7, in order to graduate at a homœopathic college, as he did in 1877, and also to increase his proficiency in the English language, in which he was deficient, though versed in Latin, Greek, French, and German. In 1877 he married Miss Lida C. Newman, eldest daughter of Judge M. B. Newman, of Wyandotte, and removed to Cincinnati, whence, after practising five years, he returned to his former residence, having in the meantime (1880) spent four months in a visit to Europe. Dr. Diederich was much interested in the Kansas City Homœopathic College, Missouri, of which he was Dean at the time of his death. Besides holding membership in several medical organizations, he belonged to several musical societies, being an enthusiast in music. He died April 6, 1898, survived by his wife and five children.

WESLEY ASBURY DUNN, M.D.,

Of Chicago, was elected to membership in the Institute at Waukesha in 1890. For six years he was a working member of the bureau (or section) of Ophthalmology, Otology, and Laryngology, presented papers, and took part in the discussions on those subjects, being regular in his attendance at our sessions. He was secretary, and had much to do with the success

of the World's Congress of Homœopathic Physicians and Surgeons held in Chicago in 1893.

Dr. Dunn was born in Marion, Ind., July 19, 1858. His early education was obtained in the public schools of his native State, and, being a bright student and applying himself assiduously to his studies, he was able at the age of seventeen to teach school, which he did for three years, employing his leisure hours in studying and reading medicine under the direction of Dr. E. P. Jones, of Marion. In 1879 he matriculated in the Bennett College of Eclectic Medicine and Surgery, Chicago. Desirous of learning about Homœopathy, he entered Hahnemann Medical College, Chicago, in the following year, and graduated therefrom in 1881. He located at Wabash, Ind., the same year, and soon established an excellent practice. After a few years he went to Europe, spending two years attending lectures and clinics on diseases of the nose and throat in the hospitals of Edinburgh, London, and Vienna. On his return in 1888, he opened an office in Chicago, was appointed Demonstrator of Histology and Microscopy in the Hahnemann Medical College of Chicago, and the following year was Professor of Laryngology and Rhinology, which position he occupied until his death. Dr. Dunn was a member of the Illinois Homœopathic Medical Association, of which he was secretary, Homœopathic Medical Society of Chicago, Clinical Society of Hahnemann Hospital, and several social and literary organizations. He was co-editor with Dr. Wilson A. Smith, for two years, of the *Medical Current*, and a frequent contributor to other journals of articles on his specialty. He was married October 30, 1883, to Miss Carrie Jones, the daughter of his preceptor. He died in Naples, Italy, March 20, 1897, leaving a widow and three children, Grace, Edith, and Francis W. A.

SUSAN ANN EDSON, M.D.,

Of Washington, D. C., was elected a member of the Institute at its session in that city in 1872. While no article from her pen has appeared in our volume of "Transactions," she has related her experience in the discussions of papers submitted by others. She was the daughter of John Joy and Sarah (Barnes) Edson, and was born in Fleming, Cayuga county, N. Y., January 24, 1823. Her father was a descendant of Samuel Edson, who settled at Bridgewater, Mass., in 1632, and also of the Pilgrim, John Alden, and other passengers of the Mayflower. Dr. Edson's school life was passed in her native town. She studied medicine with Dr. C. W. Williams, of Cleveland, and, after attending lectures at the Western College of Homœopathic Medicine at Cleveland during the sessions of 1852-3 and 1853-4, graduated therefrom in the latter year. She began practice in Cleveland, and two years later removed to Jefferson, Ashtabula county, O., practising there one year, when she settled in Washington and became associated with the late Dr. Caroline Brown Winslow. She served two years as nurse in the hospitals with the army of the Potomac, at Meridan Hill and Fortress Monroe. From the care and anxiety attending her work, she suffered from nervous prostration for nearly three years.

Among the interesting incidents of her professional life was her attendance upon the wife of the Chinese Minister on the occasion of the birth of the first Chinese baby of rank in this country. Dr. Edson had long been the physician in President Garfield's family, having been called in to attend his mother, and at the request of both the President and Mrs. Garfield continued in attendance on the former until his death. She died after a long illness, November 12, 1897.

JOHN LINDSAY FERSON, M.D.,

Of Pittsburg, Pa., was admitted to membership in the Institute at the session held at Atlantic City in 1891, but he never attended a meeting. He was the only child of Oliver and Susan Ferson, and was born in Pittsburg, November 8, 1854. After attending public school and Duff's Business College, in Pittsburg, he graduated from the latter, and became an assistant in his father's business. In 1876 he began the study of medicine with our associate, Dr. Henry W. Fulton, of Pittsburg. He entered Hahnemann Medical College of Philadelphia, from which he graduated in 1879. He began practice in Kansas City, Mo., remaining there one year, and then opened an office in his native city, where he remained till his death, July 7, 1896. Dr. Ferson was married November 24, 1886, to Miss Elizabeth Stephenson, of Stephenson's Mills, Pa., who, with a son and daughter, survives him.

ROBERT NEWTON FLAGG, M.D.,

Of Yonkers, N. Y., was elected a member of the Institute at Newport in 1895. He was the son of our late associate, Dr. Levi W. Flagg and Charlotte (Whitman) Flagg. He was born in Yonkers, August 28, 1859. He attended school in Yonkers and the High School in Hartford, Conn., which he left on account of ill-health. After being awhile at Smith's Homœopathic Pharmacy, New York, he entered upon the study of medicine at the earnest solicitation of his father, and matriculated at the New York Homœopathic Medical College, completing his three years' course in 1879, but was obliged to wait over a year for his diploma until he became of age. He served a year as interne in Ward's Island Homœopathic Hospital, and then resigned to become associated with his father, whose declining health required his assistance. Successful in practice, suave and courteous in manner, loyal to his patients and friends, his time was engrossed with his professional cares, from which he sought relief by frequent trips to Europe. Worry from financial embarrassment, caused by endorsing for a relative, brought on a mental condition which finally resulted in his death, October 1, 1897. A short time previous thereto he was married to Mrs. Eleanor Turner.

JAMES CHURCH GANNETT, M.D.,

Of Yarmouth, Me., was elected a member of the Institute at Atlantic City in 1891. He attended the session at Washington in 1892. He was the son of M. F. and Anna C. Gannett, and was born in Bath, Me., January 29, 1849. He studied medicine with Dr. William E. Payne, of Bath, attended lectures at the Hahnemann Medical College of Philadelphia, session of 1869-70, and at the New York Homœopathic Medical College in 1871-2, graduating from the latter in 1872. After practising a short time in Fredericton, N. B., and later in Waterville, Me., he settled in Yarmouth in 1878, where he remained in practice until his death, April 4, 1897. He married Miss Adria M. Gregg, of Waterville, June 14, 1880, who, with one son, James A., survives him. An elder son, Edward F., died five years before.

ADAM GIVEN, M.D.,

Of Louisville, Ky., was elected a member of the Institute at the session in Milwaukee, in 1880. Dr. Given was of Scotch-Irish ancestry, the son of Henry and Nancy (Mustoe) Given, and was born at Warm Springs, Bath county, Va., October 15, 1829. He attended the schools of his native place, and afterward Little Level's Academy at Green Briar, Va. He began the study of medicine with Dr. Luchett, of Warm Springs, and in 1853 removed to Chicago. After attending one course of lectures at Rush Medical College, 1858-9, he began to practise his profession at Woodstock, Ill., and later attended lectures at the Medical Department of Lind University (now Chicago Medical College) in 1863-4, graduating therefrom in the latter year. In 1865 he removed from Woodstock to Louisville, Ky., was appointed acting assistant surgeon, which position he resigned on account of ill-health, and for the same cause he was obliged to give up practice for a year.

Dr. Given was a prominent physician in Louisville for many years, and after practising nearly twenty years he was persuaded to try the effect of homœopathic remedies for a painful affliction he had suffered for at least two years. With no faith in the system, and less in the doctor who proposed to cure him, "with what seemed to be nothing more than loaf sugar and diluted moonshine," he took the prescription (Aloes 30), stating that if cured he would be a Homœopath. He "was relieved of all pain within twenty-four hours, and made a rapid recovery." Thinking it might be a "so happen cure," he tested the practice in other cases, becoming convinced of the correctness of Hahnemann's teachings, and continued an enthusiastic Homœopath until his death. As an old-school physician he had taken the initiative in organizing many medical charitable institutions, and as a Homœopath he was the prime mover in the establishment of the Southwestern Homœopathic College, in which he occupied the Chair of Theory and Practice, and was also treasurer of the corporation. He spent much time in literary pursuits. Among his publications was an ecclesiastical chart presenting in chronological order the origin and his-

tory of the various religious denominations of the world, and other works on historical and theological subjects. At the time of his death he was busy with his work on "Theory and Practice of Medicine." He married Miss Caroline Benstone, of Highland county, Va., June 19, 1853, who survives him. Two sons died several years before. He died September 18, 1896.

LEWIS HALLOCK, M.D.,

Of New York, was one of the original practitioners of Homœopathy in this city, and consequently in the country, and at the time of his death was probably the oldest practising physician in the United States. He was one of the physicians enrolled as members of the Institute at, or prior to, the meeting in 1846, who are considered original members and founders. In the data furnished the Bureau of Organization of the Institute, he wrote: "One of the physicians of the Hahnemann Hospital from its beginning. Have sought no professional honors, but declined repeated offers of professorship in the Homœopathic Medical College, when so largely engaged in obstetrical and general practice that additional labors were forbidden by regard to personal health and fidelity to the rights of patients; held no political or professional position, other than one from the Board of Health during the cholera epidemic in 1832; written but few medical papers, and some reports of clinical cases." Although attending the early sessions, and taking part in the discussions, there is no record of any essays or papers presented to the Institute. Those present at our session at Newport will recall our venerable colleague, who at the age of ninety-one years was active among us, attending the sessions, and taking an interest in all the proceedings. He attended the meeting of the Seniors for the first time, and read a very interesting paper on his reminiscences of the introduction of Homœopathy in New York. In November, 1826, Dr. Hallock presided at a meeting of "Graduates in Medicine," at Rutgers Medical College, to organize the "Society of Emulation in Medicine," afterward changed to the "Medical and Philosophical Society of New York." Among the active members who afterward became prominent homœopathic physicians were Drs. John F. Gray, Hans B. Gram, Lewis Hallock, Henry G. Dunnell, Walter Channing, Walter C. Palmer, A. Gerald Hull, and Stephen R. Kirby.

During the epidemic of cholera, in 1832, Dr. Hallock's wife died of that disease after an illness of only a few hours, being taken sick and dying while he was away visiting his patients. This called the attention of the doctor to the "Camphor Cure," suggested by a few physicians who claimed to know of a new method of cure—the homœopathic, the success of which in this disease led him, with others, to study and accept the teaching of Hahnemann.

Dr. Hallock was the elder son of Jacob and Sarah (Mather) Hallock, and was born in New York City, June 30, 1803. He finished his preparatory studies at Clinton Academy, East Hampton, N. Y., and began the study of medicine with a relative, Dr. Elisha Hallock, of Southold, and a

year later, 1822, returned to New York and entered the office of Dr. John W. Francis, Professor of Obstetrics in the College of Physicians and Surgeons, from which he graduated in 1826. After a continuance in practice in New York of over seventy-five years, he died March 3, 1897, leaving a family of three daughters, his second wife having died four years before.

WILLIAM HENRY WEED HINDS, M.D.,

Of Milford, N. H., was elected a member of the Institute, in 1867, at the meeting in New York, becoming a Senior in 1892. He was born in Chichester, N. H., August 1, 1833. His parents were Bargilla and Salura (Aldrich) Hinds. He attended the public schools in Chichester, Lowell, and Boston, graduating at the High School of the latter city, where his family were then residing. He studied medicine with our late associate, Dr. Daniel Holt, of Lowell, and Dr. Jonathan Brown, of Tewksbury, Mass. He attended lectures at Dartmouth Medical College in 1851-2, and at Harvard Medical College 1860-1, graduating from the latter March 6, 1861.

He was commissioned Surgeon of the Seventeenth Massachusetts Volunteers, and left for the front in the summer of that year. Later he was appointed Surgeon of the Twelfth Regiment, and served with distinction over three years, until 1864, when he returned to Boston and entered the office of Dr. Sanders. In January, 1865, he opened an office in Milford, N. H., where he continued in practice until his death, July 29, 1897. Besides his interest in his State Homœopathic Society, of which he had held the office of vice-president, he was a member of many other organizations, as the Masonic fraternity, Order of Odd Fellows, and Grand Army of the Republic. He was greatly interested in all that pertained to social, political, and educational advancement of his town and State, holding positions on the Board of Education, Board of Health, was one of the trustees of the Free Library, president of the Five Cent Savings Bank of Milford, and represented his district in the State legislature, both in the Senate and House. He was married August, 1861, to Miss Hattie M. Twiss, of Antrim, N. H., who died in 1871. August 17, 1880, he married Miss Annie M. Twiss. He died July 29, 1897, leaving two sons, one a physician of the same name, who was associated with, and succeeds him in practice.

JOHN RANDOLPH HOLCOMBE, M.D.,

Of Philadelphia, was present, and elected a member of the Institute at its session at Niagara Falls in 1888. He was the son of Pearson and Hannah Holcombe, and was born at "The Union," Lancaster county, Pa., January 13, 1849. At the age of fourteen he went to Philadelphia as a clerk in a dry-goods store in Kensington, and later in a grocery. He studied medicine with the late Dr. A. H. Burgen, of Philadelphia, attended lectures at the University of Pennsylvania, graduating therefrom in 1871, and shortly afterward adopted the practice of Homœopathy. He married Miss Emma T. Buckman, of Philadelphia, in May, 1871, who survives him with a son, Dr. Wm. B. Holcombe, a practising physician in Philadelphia. Besides his

membership in the Institute, Dr. Holcombe belonged to the Philadelphia County and State Homœopathic Societies, the Oxford and Germantown Medical Clubs, as well as the Masonic fraternity. He died December 18, 1896.

EDGAR JANNEY, M.D.,

Of Washington, D. C., attended the session of the Institute held in Atlantic City in 1891, and was elected to membership. He was the son of Aquila and Maria W. Janney, and was born in Loudon county, Va., January 18, 1853. After attending the public schools in his native place, he removed to Washington, D. C., in 1872, and taught for two years in the public schools of the district, took a competitive examination, and received an appointment in the Treasury Department, and while thus engaged began the study of medicine, and graduated from the Medical Department of Howard University in Washington in 1882. He afterward attended lectures at the Hahnemann Medical College of Philadelphia, and graduated therefrom in 1883. After holding the appointment of physician for the poor of the District of Columbia for a year, he was a member of the staff of the Washington Homœopathic Hospital for several years, which position he was obliged to relinquish on account of ill-health. He was connected with the Homœopathic Dispensary, and lectured in the Training School for Nurses. He was a member of the Homœopathic Society of the District of Columbia, the National Society of Electro-Therapeutics, and the National Geographical Society. In 1876 he married Mary Brown McPherson, a niece and adopted daughter of the late Dr. Caroline Brown Winslow, of Washington. He died January 3, 1898, leaving a widow and two daughters.

DE WITT CLINTON JAYNE, M.D.,

Of Florida, N. Y., was elected a member of the Institute at its session in New York, in 1867, becoming thereby a senior in 1892. Dr. Jayne was the last but one of eight children of Stephen Jayne, and was born in Florida, N. Y., April 6, 1817, being of the third generation of his family who lived there. His early education was received in the academies at Goshen and Montgomery, in the same county. In 1834 he began the study of medicine with our late associate, Dr. Samuel B. Barlow, then living in Florida, who was one of the early followers of Hahnemann in this country. Dr. Jayne graduated from the Medical Department of Yale College in 1839, and began the practice of his profession in his native town, where he was very successful, and acquired a great reputation throughout the county as a diagnostician. Soon overwork began to tell, and in time a cough developed which he was unable to cure, and for which he consulted his old preceptor, who had removed to New York, and was practising Homœopathy. Although prejudiced against the new method of practice, he implicitly followed Dr. Barlow's directions, and was rewarded by returning health. His personal experience for one of his thought and fairness was

sufficient to overcome his former prejudice, and led him to investigate for himself the teachings of Hahnemann, which he soon adopted. He married, December 24, 1849, Augusta, daughter of Edwin P. Seward, of Florida. They had no children. Dr. Jayne died November 12, 1897, his wife surviving him.

JULIA CHAPIN JUMP, M.D.,

Of Oberlin, Ohio, attended the session of the Institute at Atlantic City in 1891, and was elected a member. She also attended the meetings in Chicago in 1893, in Newport in 1895, and Detroit in 1896, taking part in the discussions. She was the second child, and second daughter, of John and Elizabeth Chapin, and was born at Vernon, Oneida county, N. Y., January 20, 1832. When she was four years old the family removed to Brownhelm, Ohio, and three years later to North Amherst, where Julia attended the public schools. In 1849 she began teaching in North Amherst, and for the first two terms received one dollar per week and "boarding around." She was married November 8, 1852, to Rufus E. Jump, of Erie county, Ohio. One son, their only child, died in early manhood. In 1856 they removed to Indiana, remaining two years, removing thence to Oberlin, where Mrs. Jump took a college course, and graduated in 1865. During the last three years of her course she taught in the academy, and after graduating taught five years in the grammar schools at Oberlin, then twelve years in the grammar schools of Cleveland.

In 1880 she began the study of medicine with Dr. Hamilton F. Biggar, of Cleveland, while she continued to teach. Two years later she matriculated at the Cleveland Homœopathic Hospital College, graduating therefrom in 1884, when she began practising in Oberlin, continuing there until her death, March 15, 1897. Dr. Jump was a member of the Board of Censors of the Cleveland Homœopathic Hospital College at the time of her death.

JOHN HARVEY KEENEY, M.D.,

Of Oswego, N. Y., was elected a member of the Institute at Niagara Falls in 1888. He was born in the village of Keeney Settlement, Cortland county, N. Y., August 10, 1859. He received his preliminary education in the public schools of his native place, and at Hamilton, N. Y. He studied medicine with our associate, Dr. Horace S. Hutchins, of Batavia, graduated from the New York Homœopathic Medical College in 1883, and settled in Batavia, where he remained two years, associated with his former preceptor. In 1884 he was married to Miss Kate Ford, of Elba, and in the following spring he settled in Oswego, where he built up an extensive practice, and remained until his death, March 26, 1898. Besides his membership in the Institute, he was a member of the New York State Homœopathic Society, the Oswego County Society, of which he had been president, and the Medico-Chirurgical Society of Central New York, of which he was vice-president at the time of his death. He died at Cuyler, N. Y., leaving a widow and two children, Lucy M., aged six, and Harvey Ford, aged four years.

NICHOLAS WILLIAMSON KNEASS, M.D.,

Of Baltimore, Md., was elected a member of the Institute at its session in Philadelphia in 1871, hence becoming a senior in 1896. He was the son of Horn R. and Sallie Emerson Williamson Kneass, and was born in Philadelphia, September 21, 1840. He attended school at Lawrenceville, N. J., and, returning to Philadelphia, began the study of medicine with our late associate, Dr. Walter Williamson. He matriculated at the Homœopathic Medical College of Pennsylvania, session of 1860-1, at the close of which he entered the army as Lieutenant of Cavalry, was later promoted to the Captaincy, resigned from the service near the end of the war, went to California, where he remained a few years; then returned to Philadelphia, and, resuming the study of medicine, attended lectures at the Hahnemann Medical College of Philadelphia, graduating in 1868. He was Demonstrator of Anatomy in his Alma Mater, session of 1869-70. After practising a short time in Philadelphia, he removed to Baltimore to take the practice of Dr. Charles Heerman, who had taken up his residence in Paris to become the physician of Napoleon III. A short time after settling in Baltimore an old-school patient, suffering from what was pronounced an incurable disease, came under his care, on whom he performed amputation of the thigh. The operation proved successful, and, the patient being a prominent man, it was followed by a number of important and successful operations, thus disproving the statement of the dominant school practitioners, that there were no surgeons in the homœopathic ranks. Dr. Kneass was Professor of Gynecology in the Southern Homœopathic Medical College. He married Miss Laura Punderson, of Baltimore, April 7, 1874, who, with three children, survives him. He died November 26, 1896.

LYTTLETON LYON LAZEAR, M.D.,

Of Denver, was elected a member of the Institute at its session in Buffalo, in 1897. He was the son of Thomas C. and Alice C. Lyon Lazear, and was born in Pittsburg, Pa., December 21, 1867. He received his preliminary education at Shady Side Academy, Pittsburg, and at Phillip's Academy, Andover, Mass. He studied medicine with our associate, Dr. Wm. B. Van Lennep, of Philadelphia, attended lectures at the Hahnemann Medical College of that city, graduated therefrom in 1890 and received an appointment in the Hahnemann Hospital of that city. When entering upon practice he made a specialty of Ophthalmology, and in the spring of 1892 went to Europe the better to prepare himself, remaining there until September, 1894, attending lectures at Berlin, Paris, and Innsbruck. In January, 1895, he opened an office in Pittsburg, and two years later was obliged by failing health to abandon an excellent practice, and made a trip to the West Indies, returning in May of the same year, when he went to Denver, Colo. After spending a few weeks here he went to Seattle, Wash., thence to Tucson, Ariz., in September of the same year, where he died of pulmonary hemorrhage, January 8, 1898.

WILLIAM HATCH LOUGEE, M.D.,

Of Lawrence, Mass., was elected to membership in the Institute at its session in Brooklyn, in 1858, becoming a senior in 1883. Dr. Lougee contributed considerable to the literature of our school in way of papers presented to State and local societies, and published in our journals, though but few articles appear in the volumes of "Transactions" of the Institute. He was the youngest and last survivor of a family of thirteen, and was born at Hanover, N. H., February 3, 1832. His mother dying when he was about eight years old, he was taken by a townsman by the name of Cate, in whose family he was brought up. He attended school at Pembroke Academy, N. H., and afterward taught school, at the same time studying medicine with Dr. Alpheus Morrill, of Concord, one of the original members of the Institute. He attended lectures at Dartmouth Medical College, Hanover, N. H., session of 1855-6, and at the Homœopathic Medical College of Pennsylvania, 1856-7, graduating therefrom in the latter year. He began practice at Methuen, Mass., where he continued five years. Here he married Miss Mary E. Ingels, daughter of Charles Ingels, and shortly after removed to Lawrence, where he built up a large practice, and where he remained until his death, November 18, 1897. His wife died two months before.

In April, 1878, he visited Europe, being absent nearly two years, studying diseases of the eye, general diagnoses and diseases of women, attending lectures and visiting clinics in Vienna, Prague, Berlin, and London. In 1882 he organized the Boston Gynecological Club, and was its first president. He was a member of the Massachusetts Homœopathic Medical Society, Boston Surgical and Gynecological Society, Essex County (Mass.) Homœopathic Medical Society, and Boston Homœopathic Medical Society. In the first three of these he had filled the office of president.

NATHAN R. MORSE, M.D.,

Of Salem, Mass., was elected a member of the Institute at the session in New York, 1867, becoming a senior in 1892. He will be remembered as a regular attendant at our meetings in the earlier years of his membership, taking active part in the proceedings, and as a member of various bureaus contributing much to our literature.

Dr. Morse was the oldest of a family of four sons and four daughters of Nathan and Jane (Robb) Morse, and was born in Stoddard, N. H., February 20, 1831. He received a common-school education in his native town, was fitted for college at Tubb's Union Academy, Washington, N. H., and at Nashua, as a private pupil of M. C. Stebbins, principal of the High School, with our late associate, Dr. John H. Woodbury. He entered Amherst College, Amherst, Mass., in 1853, and while preparing for, and during his course in, college, taught school to pay his expenses. During his senior year he published the *Amherst College Magazine*. Graduating in 1857, he taught school in Marion, Mass., and later was principal of the

High School at Holyoke, which position he resigned in the spring of 1860 to become private tutor in the families of the Rev. Levi Parks and his son, W. A. Parks, of Ouachita, La. The winter of 1860-1 was the winter of secession, and in June, 1861, he returned north. He had intended to enter the profession of law, but concluded to enter that of medicine, which he had previously studied. He attended his first course of lectures at Harvard Medical College, and in the fall and winter of 1861-2, took his second course at the University of Vermont, at Burlington, graduating therefrom in June, 1862. After spending a short time in the office of Dr. J. H. Woodbury, then living in Boston, he located at Reading, Mass., in August of the same year, where he had a successful practice. After a few months' residence here he was appointed a member of the School Commission, and made its chairman, and was re-elected and made chairman each succeeding year until he resigned in July, 1865, when he removed to Salem, Mass., at the instance of Dr. Hiram Gore, whom he succeeded in practice when the latter removed to Boston. In March, 1859, Dr. Morse married Miss Lottie L., youngest daughter of Captain Frederick Bordin, of Charleston, S. C., who died May 4, 1863, leaving two sons. December 6, 1864, he married his second wife, Rebecca H. Brown, of Gorham, Me. Dr. Morse died August 5, 1897.

WILLIAM OWENS, M.D.,

Of Cincinnati, O. Among those who were elected members of the Institute, in 1865, the first meeting after the interregnum caused by the Civil War, there was none who became more prominent than Dr. Owens. Serving on committees and bureaus, always ready with his reports, prompt in his attendance at the meetings, taking an active part in the discussions, he was a figure well known to most of the members. Besides taking active part in various other societies of which he was a member, presenting papers, etc., he has contributed much to our periodical literature, including several valuable provings.

Dr. Owens was the son of John and Elizabeth Beaver Owens; the former, born in Wales, came to this country when two years old, and the latter was a native of Pennsylvania. He was one of a family of nine sons and four daughters, and was born in Warren, Trumbull county, O., April 24, 1823. His early education was of the most meagre character, he being obliged to relinquish his studies during the winter months owing to the heavy snow-storms, and the distance of his school from his home. His desire for acquiring knowledge was partially met by reading all the books in his father's house and such as he could obtain from the neighbors, the reading of which developed in him a fondness for travel, and he left home with an invalid army officer, with whom he spent two years visiting Florida, the West Indies, and South America. Returning to Cincinnati, he worked at the cooper's trade, devoting a portion of his time to study, and later, in the spring of 1843, entered Woodward College, attending recitations part of the day, until 1846, when he obtained a position as an

assistant in a drug store. The Mexican war breaking out in that year, he enlisted in the First Regiment Ohio Volunteer Infantry, and was engaged as hospital steward in nearly all the important battles under General Taylor. Being mustered out of service, he returned to Cincinnati and resumed his position in the drug store, where he remained until 1849, when he graduated at the Eclectic Medical College, in which he was Demonstrator of Anatomy the two following years. In 1851 he accepted a similar position in the Western College of Homœopathy at Cleveland, and attended a course of lectures upon homœopathic Materia Medica and Therapeutics. He returned in the spring of 1852 to Cincinnati, and entered upon the practice of Homœopathy. In 1855 he became interested in a water-cure establishment at Granville, O., which did not prove a success, and engaged in a similar undertaking with similar results at Yellow Springs, and returned to Cincinnati in November, 1858. In 1861 at the outbreak of the Rebellion, his circumstances not having brightened, he organized two companies for the war, one of cavalry, the other of infantry; the former was accepted, and he was commissioned as lieutenant, afterward becoming captain, his company being attached to the Fifth Ohio Cavalry. His company rendered important service at the battle of Shiloh, and on two occasions he assisted in cutting railroad communication in the rear of the Confederates, resulting in the capture of Corinth. He was assigned to look after the sick and wounded, took part under General Sheridan in the pursuit of the rebels to Boonville, was detailed to the charge of a cavalry field-hospital, occupied a conspicuous position in the field during the battles of Iuka and Corinth, and on an expedition into northern Alabama in December, 1862, a battalion of raw Alabama recruits being without a commander, he was ordered to assume command, and his conduct was highly commended in special order. He participated in all the battles around Chattanooga, was with General Sherman in his "March to the Sea," and at Cherokee, Ala., October 20, 1863, headed a cavalry charge, in which he narrowly escaped death in a pistol encounter with Colonel Forest, who was taken prisoner. On being mustered out as captain on the expiration of his term of enlistment, he rejoined the army as acting assistant surgeon of the U. S. General Hospital, taking charge of No. 16 at Nashville, where he considerably lessened the death-rate, for which he was personally complimented by the medical inspector.

At the close of the war Dr. Owens returned to Cincinnati, and resumed practice. He was one of the founders of the Pulte Medical College, and for several sessions, beginning with the first in 1872, occupied the Chair of Anatomy, was afterward Dean of the Faculty and Professor of Materia Medica, holding the position of Emeritus at the time of his death. He married Miss Sarah E. Wilcox, of Cincinnati, May 12, 1853, by whom he had six children, four girls and two boys, a girl and boy dying in infancy; the second son, a member of the Institute, died in 1891. Dr. Owens had been troubled with cystitis for several months, and in the latter part of last November arrived in Los Angeles, Cal., on a visit to his brother, Dr. James B. Owens. He was much exhausted by the journey, in a few days passed into a collapse, and died December 15, 1897.

LUMEN BOYDEN PARKHURST, M.D.,

Of Northampton, Mass., was elected a member of the Institute, in 1881, at its session at Brighton Beach. He was born in Milford, Mass., October 26, 1844. He studied medicine with our late associate, Dr. Wm. B. Chamberlain, of Worcester, attended lectures at the Boston University School of Medicine, and graduated therefrom in 1879. After practising a short while in Boston, he removed to Northampton the year of his graduation, where he remained in practice. He died November 7, 1896.

LESLIE ALMON PHILLIPS, M.D.,*

Of Boston, was elected to memership in the Institute at Brighton Beach in 1881. He was a regular attendant at our meetings, contributed papers, and took an active part in the discussions. From 1884 to 1892 he was a member of the Bureau of Gynecology, and its chairman in 1886.

Dr. Phillips was born in Fitzwilliam, N. H., in 1847. His early education was obtained in the public schools of that place. After spending some time as teacher, editor, publisher, and railroad contractor, in Illinois, Colorado, and elsewhere, he returned to Illinois, and spent two years in the study of medicine with Dr. John Moore, of Quincy. In 1877 he graduated from the Boston University School of Medicine, and began practice in Watertown, Mass., whence he removed to Boston to become associated with our late associate, Dr. John H. Woodbury, a former preceptor, to whose business he succeeded in January, 1879, one year previous to Dr. Woodbury's death, and was soon in the enjoyment of a large and lucrative practice. He was a prominent member of many medical societies, local, State, and national, and was particularly identified with the Massachusetts Surgical and Gynecological Society, of which he had been president, and for many years secretary. He died April 3, 1896.

PETER WILHELM POULSON, M.D.,*

Was elected a member of the Institute from San Francisco, in 1867, at its session in New York. Dr. Poulson was born in Copenhagen, Denmark, December 14, 1831. His father was a Swede, his mother a Norwegian. His full name was Peter Wilhelm Poulson, Fagerstjerne, the last being a Swedish family name that he did not use. He was educated in various schools of Copenhagen, studying law, theology, and medicine with Dr. Hans Thompson, of that city. After graduating from the Military High School of Artillery, he served in the war with Germany as lieutenant of artillery. Broken down in health, he was granted two years' leave of absence to come to this country during the Civil War, for military observations, and afterward resigned his commission. In the meantime he at-

* Omitted from the "Transactions" of 1896.

tended a course of lectures, and graduated from the New York Homœopathic Medical College in 1866, registering from Council Bluffs, Ia. He practised in Council Bluffs, Omaha, Salt Lake City, and other places in Utah and in California, moving from place to place in quest of health. In 1886 he established the Fruitvale Homœopathic Hospital in Alameda county, Cal., for the treatment of chronic nervous diseases. He was a member of numerous medical societies, the author of several political pamphlets, medical papers, a drama called "Kay Lyrre," and "The Light of Messiah." He translated Dr. Lutze's "Chronic Diseases" into the Danish language. He married Miss Alice Staples, of Elba, N. Y. He died in April, 1894.

CHARLES GOTTLIEB RAUE, M.D.,

Of Philadelphia, was elected to membership in the Institute at Boston, in 1869, becoming a senior in 1894. As a member of the Bureau of Psychological Medicine, which he was almost continuously from 1872 to 1881, he contributed an article on "The Retentive Power of the Sensorial Faculties," 1874, about his only contribution to our "Transactions," as his literary labor was mostly outside of society work. The publication in 1847 of "The New Psychology (Die Neue Seelenlehre) of Dr. Beneke, Arranged for the Use of Teachers," gave him considerable reputation, and shows the trend of his thought. Five editions were published of this work, the third being translated into Frieslandish in 1859, the fourth into English in 1871. Without knowing of this latter translation, Dr. Raue had wholly re-written the work in English and enlarged it, the greater part being published in the *N. A. Journal of Homœopathy* during the years 1871-76. In 1868 he published his "Special Pathology and Diagnostics, with Therapeutic Hints," being the substance of his lectures. A second edition, entirely re-written and enlarged, was issued in 1882, and a third edition in 1885. He published the "Annual Record of Homœopathic Literature" six years, 1870 to 1875. He was co-editor, with Drs. Knerr and Mohr, of "Hering's Guiding Symptoms," Vols. III. to X., 1881 to 1891, and also the "Memorial of Constantine Hering," 1884. In 1889 he published his "Psychology as a Natural Science." His lesser works consisted mostly of his lectures to the students, and reprints of articles contributed to the journals.

Dr. Raue was born in Nieder Cunnersdorf, Saxony, May 11, 1820. He graduated from the Seminary (Teachers' College) at Bautzen, Saxony, in 1847, after which he taught school for several years at Burkau, where he became interested in Professor Beneke's "Views on Psychology." In 1848 he came to the United States with a letter of introduction to Dr. Hering, who relates: "Raue was assistant teacher to one by name of Dressler, who was at the head of a higher institution of learning. Raue so highly distinguished himself in this capacity that Dressler wished to appoint him his successor, but Raue said: 'I want to go to America, and I

want to study medicine.' There was a lack of funds. In order to obtain these he was advised to prepare a work for students on the 'Psychology of Beneke.' He did so successfully, and made a sensation. He arrived in America, and came to me. At first I advised him to study for the ministry. He got furious. 'I want to be a doctor, nothing else, and I want to be your student.' I thought to myself, this fellow will be either very much, or else he will amount to nothing at all, and adopted him." Thus began a friendship between these two men, Dr. Hering being twenty years the senior, that remained unbroken until the death of Dr. Hering thirty-two years later. Dr. Raue attended lectures at the Philadelphia College of Medicine and Surgery, 1848 to 1850, graduating therefrom the latter year. For a short time he took care of the practice of Dr. Gosewich, of Wilmington, Del., during his absence in Europe. From 1851 to 1858 he practised in Trenton, N. J., and in 1858 removed to Philadelphia, where he remained until his death. In 1864 he was appointed Professor of Special Pathology and Diagnostics in the Homœopathic Medical College of Pennsylvania, which position he held until the organization of the Hahnemann Medical College of Philadelphia in 1867, when he was appointed Professor of Practice of Medicine, Special Pathology, and Diagnosis, filling this chair until the end of the session of 1870-1, two years after the consolidation of the two colleges, when he retired from college work. He married Miss Phillipine J. Welfling, who died August 1, 1865, leaving one son, Adolph. He married Miss Hermine Juengerich December 30, 1868. Dr. Raue died August 21, 1896, leaving a widow and five children, Adolph, J. Ferdinand, Johanna, Sigmund, and Carl J. Ferdinand and Carl are homœopathic physicians practising in Philadelphia.

GORDON CORTLAND ROCKWELL, M.D.,*

Of Chicago. Among those elected to membership in the Institute at Denver, in 1894, none gave brighter promise than the subject of this memoir. Dr. Rockwell was the eldest son of our fellow-member, Dr. Cortland Butler Rockwell, and was born at Waterford, Conn., July 14, 1866. He received his early school training in the common schools of Connecticut, and later, on removal of his family thereto, of Wisconsin and Illinois. He attended the High School in Chicago and afterward the High School at Faribault, and also the Shattuck Military Academy at that place, where he graduated. Returning to Chicago, he entered his father's office as a student of medicine, attended lectures at the Chicago Homœopathic College, and graduated in 1894. On graduating he was elected Assistant Demonstrator of Anatomy in his Alma Mater. In the autumn of 1895 his father took a much-needed vacation to California, leaving a large practice to the care of his son, and while attending a severe case of diphtheria he contracted the disease, which, after a week's continuance, terminated fatally, December 9, 1895.

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* Omitted from the "Transactions" of 1896.

JOSEPH RODES, M.D.,

Of San Diego, Cal., was elected a member of the Institute at Waukesha in 1890. He was the second child of James and Margaret (Stewart) Rodes, and was born in Philadelphia, October 15, 1863, where he attended the public schools. He began the study of medicine with our late associate, Dr. A. R. Thomas, in 1882, entered the Hahnemann Medical College in 1884, and, graduating in 1887, became assistant to Dr. Wm. B. Van Lennep, our fellow-member. He removed to San Diego, Cal., in 1889, making a specialty of diseases of the eyes, ears, nose, and throat. He married Miss Josephine Fleming Keenan, April 2, 1891. He was drowned off the coast of La Jolla, one of the suburbs of San Diego, where he had a summer residence, December 20, 1896, leaving a wife and three children.

HUGH MONTGOMERY SMITH, M.D.,

Of Brooklyn, N. Y., was elected to membership in the Institute at its meeting in Washington, in 1892. Dr. Smith was born near Auburn, Cayuga county, N. Y., September 21, 1848, the youngest of a family of six, another member being our fellow-member, Dr. St. Clair Smith. Hugh entered the New York Homœopathic Medical College in 1874, graduating therefrom in 1876. He went to Europe, and studied two years in the hospitals in Vienna. On his return he was appointed resident physician to the House of Industry in New York. After remaining one year here, he opened an office in Brooklyn. In June, 1890, he married Miss Annie E. Morrill, daughter of the late Dr. Henry E. Morrill, one of the early practitioners of Homœopathy in Brooklyn. He died August 30, 1897. A memoir by Dr. Chapin was published in the *N. A. Journal of Homœopathy*, October, 1897.

JUSTIN EDWARDS SMITH, M.D.,*

Of Cleveland, attended the session of the Institute at Lake George in 1879, was elected to membership, and took a prominent part in the scientific discussion. For a number of years his face was a familiar one at our meetings, and the part taken by him in contributing and discussing interesting and instructive papers on microscopy and kindred subjects will be recalled by our older confrères. During the five years subsequent to 1881 he was an active member of the Bureau of Microscopy and Histology, and in 1882 was its chairman. At the meeting of the Institute in Washington, in 1892, he was reported by the assistant treasurer as being disabled by almost total blindness, caused, to no inconsiderable extent, by his devotion to microscopical research.

Dr. Smith was born at Newburyport, Mass., October 19, 1826. He re-

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* Omitted from the "Transactions" of 1896.

ceived his preliminary education from private tutors. From 1845 to 1847 he studied medicine with Dr. Norman W. Smith, at North Amherst, Mass. Later he was in Natchez, Miss., and from 1858 to 1861 was a student of Dr. Walter Stewart, a homœopathic physician from New York, who had settled there several years before on account of ill-health. He afterward spent three years in the offices of Dr. Wm. Eames and Dr. Hubbard, of Ashtabula, O. He practised in British Honduras in 1867, and in several places after this, continuing his "steady and constant microscopic work" until 1878, when he settled permanently in Cleveland, received an honorary degree from the Homœopathic Hospital College of that city, and for several years filled the Chair of Histology and Miscroscopy in that institution. He was the author of a number of papers on microscopic, medical, and other subjects. In a letter to an officer of the Institute, he wrote, in 1888: "My work in behalf of the American Institute of Homœopathy, I regard as the crowning feature of my life; am proud of it; it will germinate long after I am under the sod." He died May 17, 1894.

EDWARD P. STRUNK, M.D.,

Of Brewster, N. Y., was elected a member of the Institute at Niagara Falls in 1888. He was the eldest son of Peter and Catherine Strunk, and was born at Poestenkill, Rensselaer county, N. Y., April 6, 1851. He spent his early days on a farm, and attended the district school until he was fourteen years old, when he went to Fort Edward Institute, and then to the Albany Business College. He studied medicine with our late associate, Dr. Charles H. Carpenter, of Troy, attended lectures at the New York Homœopathic Medical College, graduating therefrom in 1874. He began practice at Cohoes, N. Y., but within a few months removed to Brewster, where he continued until his death, March 12, 1897, when, in returning from a call in the country, his carriage was run into by a train which he was prevented from hearing by the noise of a rain-storm. He was married in 1890 to Miss Grace Storm, who died, childless, three years later.

JOHN FRELINGHUYSEN TALMAGE, M.D.,

Of Brooklyn, was elected a member of the Institute at Washington in 1872, becoming a senior in 1897. He was the son of Thomas and Sophia Van Veghten Talmage, and was born at Mt. Verd, near Somerville, Somerset county, N. J., March 11, 1833. His preparatory education, begun in the village academy, was completed under the tuition of Rev. T. W. Chambers. He entered Rutgers College in 1849, and graduated in 1852. In a trip through the Southern States he made the acquaintance of Drs. A. R. Burritt and E. D. Gilson, homœopathic physicians of Huntsville, Ala., and, having an opportunity of observing their treatment, was surprised at the cure of cases pronounced hopeless by physicians of the old school, and determined to devote himself to the practice of Homœopathy. He began the study of medicine with Drs. Burritt and Gilson, and, returning north, con-

tinued his studies under Dr. A. Cooke Hull, of Brooklyn, our late associate; attended lectures at the Medical Department of the University of New York, graduated therefrom in 1859, when he became a partner of Dr. Hull's, continuing that relation about twelve years. Later he took his brother Samuel into partnership. He was physician to the Brooklyn Orphan Asylum, had charge of the Department of Diseases of Women in the Brooklyn Homœopathic Dispensary, was visiting physician to the Homœopathic Hospital of Brooklyn, consulting physician of the Gates Avenue Dispensary, as well as of the Brooklyn Nursery and Infants' Hospital. In 1873 he was appointed surgeon of the Eleventh Brigade, National Guard. Dr. Talmage married Miss Maggie A., youngest daughter of Thomas Hunt, in 1863. She died July 7, 1881, leaving a daughter and three sons. Dr. Talmage was taken sick while attending the inauguration of President McKinley, was confined to his bed for six weeks in May and June, and died suddenly of angina pectoris at Rye, N. Y., where he had gone to spend the summer with his daughter, Mrs. John Murray Mitchell, June 30, 1897.

AMOS RUSSELL THOMAS, M.D.,*

Of Philadelphia, was elected a member of the Institute in Boston, in 1869, attaining seniority in 1894. In the volumes of "Transactions" for the years 1871 to 1877 are to be found his reports on various subjects. Dr. Thomas was of Welsh ancestry, the son of Azariah Thomas, an officer in the War of 1812, and was born at Watertown, N. Y., October 3, 1827. Working on a farm until nearly twenty years of age, and devoting his evenings and other leisure time to study, he qualified himself to teach school, which he did for four years in the western part of New York. In 1850 he engaged in mercantile pursuits in Ogdensburgh, N. Y., which he soon abandoned. Getting possession of an old Indian skull, which had been exhumed near his place of business, he borrowed a work on anatomy, and became so much interested that he began the study of medicine with Dr. S. Potter, of Syracuse, N. Y. He attended lectures at the Syracuse Medical College, 1851 to 1854, when he graduated and went to Philadelphia. Here he attended a course of lectures, and again received a diploma from the Medical University of Pennsylvania. At his graduation he was offered the position of Demonstrator of Anatomy, which he accepted, and made Philadelphia his home. In 1856 he was appointed Professor of Anatomy in his Alma Mater, which position he held for ten years. At the same time he was made Professor of Artistic Anatomy in the Pennsylvania Academy of Fine Arts, being the first one called to fill that position, which he did with credit to himself and the Institute for fourteen years. In 1860 he was appointed to a similar Professorship in the School of Design for Women, which he filled until 1872.

Having volunteered his services as surgeon during the Civil War, in 1863, he was assigned the charge of a ward in the Armory Square Hospital

* Omitted from the "Transactions" of 1896.

at Washington. He afterward resumed practice in Philadelphia, having adopted Homœopathy. In 1867 he was associated with Drs. C. Hering, C. G. Raue, J. C. Morgan, R. Koch, and L. Stephens, in organizing the Hahnemann Medical College of Philadelphia, being elected to the Chair of Anatomy, a position he held up to the time of his death, as he did the Deanship, to which he was elected in 1874 on the retirement of Dr. Guernsey. In both positions he acquired a world-wide reputation, and exercised great influence. Dr. Thomas was the author of several published addresses, a "Guide for Making Post-Mortem Examinations," was editor of the *American Journal of Homœopathic Materia Medica* from 1871 to 1876, co-editor of *The Hahnemannian Monthly*, 1877-78. He was a member of the Philadelphia County and Pennsylvania State societies, and various art, natural science, historical, and horticultural associations. He married Miss Elizabeth Bacon, of Watertown, N. Y., who, with a son, our fellow-member, Dr. Charles M. Thomas, survives him. He died at Devon, Pa., October 31, 1895.

WILLIAM WATSON TYDEMAN, M.D.,

Of Knoxville, Tenn., was elected a member of the Institute at Atlantic City in 1891. He was born in England in 1824, studied medicine with Dr. McKern and Dr. Joseph Kidd, of London, and while a young man went to Jamaica, W. I., where he practised his profession about twenty years. He came to the United States about 1865, located at Asheville, N. C., where he remained several years, thence removing to Knoxville, Tenn., where he had a successful practice for another twenty years, when, on account of failing health, he went further south, and for the past four years he alternated between South Carolina pines in winter and North Carolina mountains in summer. He was married in 1859, in England, to Miss Letitia Tompkins, who died in 1888. He died January 21, 1898. Of ten children, two daughters only survive him; Lucy, the wife of Dr. Douglas Caulkins, a homœopathic physician in Knoxville, Tenn., and Emily, a student of medicine in Columbia, S. C.

MAHLON MURPHY WALKER, M.D.,*

Of Philadelphia, was one of the large number of members elected at the session of the Institute in Boston, in 1869, becoming a senior in 1894. He served on the Bureau of Obstetrics, was its chairman in 1883, attended the meetings, contributed papers, and took part in the discussions on scientific subjects.

He was the son of Charles and Sarah C. Murphy Walker, and was born in Buckingham, Bucks county, Pa., March 15, 1845. His parents and ancestors, from the time of William Penn, were members of the Society of Friends, and he received his early education at the Friends' Central High

* Omitted from the "Transactions" of 1896.

School of Philadelphia. At the age of nineteen he was principal of the Morrisville (Pa.) High School; which position he relinquished to study medicine with Dr. Thomas Moore, of Germantown. He attended lectures at the Homœopathic Medical College of Pennsylvania, 1865 to 1867, graduating the latter year, when he began practice in Germantown. He continued there with the exception of part of the years 1868-9, which he spent with Dr. B. F. Betts in attendance in the hospitals and medical schools of Vienna, Berlin, Bologna, Paris, and London. Among the several societies of which he was a member may be mentioned the Germantown Scientific Society, of which he was treasurer; Germantown Horticultural Society, of which he had been vice-president; the Mutual Building and Loan Association of Germantown, of which he was president; Enterprise Homestead Company, Academy of Natural Sciences, and the Historical Society of Pennsylvania. After serving the Pennsylvania State Homœopathic Medical Society five years, he was elected vice-president. He was one of the founders and president of the Germantown Homœopathic Society, president of the Children's Homœopathic Hospital of Philadelphia, and the Hahnemann Club of Philadelphia. He married October 22, 1874, Miss Mary E. Taylor, of Germantown, who, with two daughters and a son, survives him. He died March 31, 1896.

CHARLES JACKSON WATTS, M.D.,*

Of Chicago, was elected to membership in the Institute at the meeting in Chicago, in 1893. He was the son of Jeremiah Watts, of Racine, Wis., where he was born November 27, 1868. He became so interested in the science of medicine, from reading articles of Dr. Carroll Dunham's, that he concluded to take up its study, giving up a project of entering some commercial business. He entered Hahnemann College, Chicago, in 1890, and, graduating therefrom in 1893, began practice in Chicago. He died September 21, 1895.

JOSEPH RALSEY WHITE, M.D.,

Was elected a member of the Institute at the session in New York, in 1867, becoming a senior in 1892. He was the brother of our fellow-member, Dr. T. C. White, of Rochester, N. Y. He was born at Long Ridge, near Stamford, Conn., April 12, 1830. His parents were Joseph and Mary Miller White. A few years after his birth his family removed to Otsego county, N. Y., where he attended the academy at Gilbertsville, and later the Delaware Literary Institute at Franklin, in the adjoining county. He began the study of medicine with his brother-in-law, our late associate, Dr. Charles Sumner, of Gilbertsville, attended lectures at the Albany Medical College, where he graduated in 1856. On the removal of Dr. Sumner to

* Omitted from the "Transactions" of 1896.

Rochester the same year, he succeeded to his practice. He was married June 8, 1858, to Miss Francis Wells Millard, of Gilbertsville. In 1865 he removed to New York, and opened an office at Harlem, the upper and, at that time, detached part of the city, where he soon acquired a large practice. His wife died in 1895, when impaired health compelled him to relinquish active practice, and he removed to Rochester, making his home with his daughter, Mrs. C. D. Van Zandt, where he died March 15, 1897. He was a member of the State and County societies, the Carroll-Dunham and Hahnemann clubs, was a visiting physician to Ward's Island Hospital, and vice-president of the Alumni Association of the New York Homœopathic Medical College, he having taken a degree therefrom in 1870.

HARRISON WILLIS, M.D.,

Of Brooklyn, was elected a member of the Institute at Washington, in 1892. He was the son of Amasa and Lydia Willis, and was born in Rehoboth, Mass., July 15, 1836, of American ancestry dating back to 1640. He attended the Classical Academy of Sekonk, now East Providence, R. I., and during the winter terms taught school, which was kept up for ten years, beginning when he was fifteen years old. He began the study of medicine in 1858 with Dr. George Barrows, of Taunton, Mass., attended lectures at the Berkshire Medical College, Pittsfield, in 1862, and the Cleveland Homœopathic College, 1864-5, graduating from the latter in 1865. He began practice at Clinton, N. Y., and in 1869 removed to Brooklyn, where he continued until his death, December 30, 1896. He made a specialty of surgery, in which branch he acquired a high reputation. He was visiting surgeon to the Brooklyn Homœopathic Hospital for over twenty years, consulting surgeon to the Memorial Hospital, Brooklyn Maternity, and Brooklyn Nursery. Dr. Willis was twice married. His wife died in 1872, and he married, in 1874, the wife who, with nine children, survives him. Two of his sons are practising physicians in Brooklyn, Drs. Harrison Willis, Jr., and Clinton Willis.

AMOS FRANCIS WORTHINGTON, M.D.,

Of Cincinnati, was elected a member of the Institute at Chicago in 1870, becoming one of the seniors in 1895, and attended their reunion, for the first time, last year at Buffalo. Dr. Worthington was the son of Amos and Francis Wood Worthington, and was born in Cleves, O., August 27, 1832. After attending Farmer's College, College Hill, Cincinnati, he entered, as clerk, a general store in that village, where he remained several years, going thence to Iowa, where at Worthington, a town named for him, he carried on the same business, with the post-office and railroad station in connection therewith. He returned to Cincinnati, and in 1863 formed a partnership with the late George W. Smith, and bought out the Homœopathic Pharmacy of Dr. Parks. Under the firm name of Smith & Worthington, the business was continued until 1873, when the partnership was

dissolved. After conducting the same business in another location, for nearly twenty years, Dr. Worthington sold out, and devoted his attention to the practice of his profession, having studied medicine under Dr. Pulte and Dr. H. F. Biggar, and graduated from the Cleveland Homœopathic College in 1870. Dr. Worthington married, November, 1861, Miss Ellen Stellman, of College Hill. He died March 10, 1898, leaving a widow and two daughters.

SUPPLEMENTARY REPORT OF MONUMENT COMMITTEE.

Circulars were sent out to the ten thousand homœopathic physicians. Eight hundred and forty-five subscriptions were received, amounting to $30,828, of which $21,136 have been paid, leaving a balance due of $9,662. An additional amount of $244 was received from interest on deposits, etc., increasing the total receipts to $21,380. The amount paid out was $21,088, leaving in the treasury a balance of $292.

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